DCN: 907-SAI-EPCRA-COMM-02-17428

September 24, 2009

Ms. Mary Wesling (SFD-9-3)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street, 8th Floor
San Francisco, CA 94105

Contract Number: GS-10F-0076J-D0907
EPA Region: Region 9
Title: Superfund Enforcement Support Services (SESS ERE)
SAIC Project No.: (018) 01-1317-01-1327/01-1317-01-1700
EPA Project Officer: Chris Reiner, EPA PO
SAIC Project Officers: Kimberly Burckle, SAIC PO & Jonathan Leo, SAIC Deputy PO

RE: JCI Jones Chemicals, Inc. - Torrance Draft Report
1401 West Del Amo Boulevard, Torrance, CA 90501

Dear Ms. Wesling,

Enclosed is the JCI Jones Chemicals, Inc.– Torrance (JCI) Draft Report for your review. On June 12th, 2009, an Emergency Planning and Community Right-to-Know Act and Risk Management Plan (RMP) inspection was conducted by Robert Lucas of the U.S. Environmental Protection Agency (EPA) and Nancy Wenning of Science Applications International Corporation.

The JCI facility in Torrance, CA, is situated on 4.8 acres and primarily manufactures bleach and supplies chemicals that disinfect bulk water systems to protect public health. Chemicals are brought onsite in bulk quantities primarily by rail, repackaged into smaller containers, and then transported to customers on an as-needed basis.

Chlorine and sulfur dioxide (anhydrous) are the regulated substances used at this site with a maximum quantity of 180,000 pounds for sulfur dioxide and 1.8 million pounds for chlorine. The quantity shown on JCI"s original RMP for chlorine was 900,000 pounds, but reduced to 180,000 pounds due to recent policy changes made by the Transportation Security Administration (TSA) regarding railroad systems requiring railcars to be held no longer than 48 hours. As JCI may have had as many as ten railcars loaded with chlorine onsite at any time, and the capacity for each railcar was 180,000 pounds, JCI had to reduce the quantity in their RMP and notify the fire department of this change.

During the inspection, JCI had questions regarding the term 'maximum intended inventory' for RMP requirements, as at another JCI facility on the East Coast, an EPA

inspector had defined this as 'the *single* largest storage capacity on site of each product'. JCI authorities questioned this as they had always taken into account any storage vessel that contained a regulated substance. Nonetheless they notified their facilities of this 'change' and requested them to correct their maximum intended inventory amounts. Following the inspection, EPA inspector Robert Lucas verified with the EPA Region 9 authorities that JCI's original interpretation was correct. Mr. Lucas notified JCI (attached under Facility Documents) that the guidance refers to '*any* vessel in which you store or process a regulated substance above its threshold quantity.' Per the understanding, JCI facility made the necessary corrections to their RMP/PSM.

At the time of the inspection, the facility appeared to be well operated and maintained. Documents requested during the inspection were readily available and found to be very comprehensive and satisfactory upon review. JCI's latest three Hazardous Material Disclosures with Business Plans were reviewed and verified onsite by the inspectors and deemed satisfactory. Copies of these documents were not requested and are not included as attachments. No potential violations were found at this facility at the time of inspection.

Should you have any questions or comments upon review, please don't hesitate to contact me at (530) 873-2575.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Diane Bodine

Diane Bodine
Work Assignment Manager

Enclosures:

1. EPCRA § 302-312 / CERCLA § 103 Inspection Checklist
2. EPCRA § 302-312/CERCLA §103 and CAA § 112(r)7 Inspection Report
3. Risk Management Program Level 3 Process Checklist and CAA § 112(r)7 Findings
4. Signed Notice of Inspection Forms
5. Receipt of Notice of Right to Claim Confidentiality
6. Receipt of Documents
7. Digital Camera Photo Log – Archival Images
8. Facility Documents

cc: SAIC Document Control Officer

Facility Name: JCI Jones Chemicals Inc.
Inspectors: Nancy Wenning, SAIC & Robert Lucas, EPA
Inspection Date: June 12, 2009

EPCRA §§302-312/CERCLA §103
Inspection Checklist

Facility Name: JCI Jones Chemicals, Inc. – Torrance Facility

Facility Address: 1401 W. Del Amo Blvd., Torrance, CA 90501

Facility Rep. Name/Title/Phone #: Tim Ross, West Coast Vice President, 310/523-1629

Inspectors Name/Phone #: Nancy Wenning (SAIC), 510/466-7163 & Robert Lucas (EPA), 415/972-3069

Date of Inspection: June 12, 2009

1. LEPC/CUPA and Fire Department contact(s) (include contact name and phone numbers)

   Anna Olekszyk, CUPA, 213/978-3686
   Captain Armistead, Los Angeles Fire Department, Station 79, 3-1-1 or 213/485-5971

2. Brief description of receptors (residents, schools, other facilities, etc.)

   Within ¼ mile: residences, childcare center
   Within ½ mile: commercial businesses and offices

   Distance to receptors
   - X < 1/4 mile
   - X < 1 mile
   - ☐ < 4 miles
   - ☐ > 4 miles

3. Number of employees: 28

4. Hours of operation: 24 hours from Sunday 8:00PM – Friday 8:00PM & 8 hours on Saturdays for loading, deliveries and maintenance only (no operations processes).

5. Brief description of operation (hazardous substances used or stored on-site):

   This JCI facility in Torrance, CA is situated on 4.8 acres and primarily manufactures bleach and supplies chemicals that disinfect bulk water systems to protect public health. Chemicals are brought onsite in bulk quantities primarily by rail, repackaged into smaller containers, and then transported to customers on an as-needed basis. Chlorine and sulfur dioxide (anhydrous) are the regulated substances used at this site. The maximum quantity onsite for sulfur dioxide is 180,000 pounds and 1.8 million pounds for chlorine.

6. a) Has facility had EHSs on site at any time in the last three calendar years in an amount equal to or greater than the TPQ?
   X Yes ☐ No

b) Has facility had a CERCLA HS or an OSHA HS on site at any time during the last three calendar years in an amount equal to or greater than 10,000 lbs. (Or in California, more than the CA listed TPQ)?
X Yes ☐ No

c) Has facility had an accidental release of an EHS or CERCLA HS?
☐ Yes X No (If yes, to either a), b), or c), continue with checklist.)

7. EPCRA §303: Has facility provided name and contact information for the Facility Emergency Response Coordinator? (If yes, request copy)
X Yes ☐ No

Tim Ross, West Coast Vice President, 310/523-1629

8. EPCRA §304: Has facility had any accidental releases of reportable quantities of EHSs or CERCLA HSs? If yes, fill in the information on the table in Attachment 1 and request documentation (monitoring equipment data, maintenance logs, spill reports, etc.).
☐ Yes X No

9. EPCRA §311: Has facility provided either a list or MSDSs for EHSs on site in quantities equal to or greater than the TPQs?
X Yes ☐ No (If yes, request copy)

10. EPCRA §312: Has facility provided a Tier II annual hazardous substance inventory to the SERC, LEPC and Fire Department (or in California, a Hazardous Material Disclosure with their Business Plan to the CUPA)?
X Yes ☐ No (If yes, request copy)

List years: 2008, 2007, 2006 - These were reviewed and verified onsite by the inspectors and deemed satisfactory. Copies were not requested and are not included in the attached Facility Documents.

11. Has facility prepared and submitted a Risk Management Plan per CAA §112(r)?
X Yes ☐ No

Release Summary		
Release Date, Time and Amount (Also - when was facility aware of the release.)	**Chemical Name(s)/CAS #(s)**	**To Whom Reported (include report number(s), dates and times and request copies of spill reports and letters)**
N/A	N/A	N/A

U.S. Environmental Protection Agency, Region IX
Emergency Prevention and Preparedness Section
EPCRA § 302-312/CERCLA §103 and CAA § 112(r)7
Inspection Report

AUTHOR: Nancy Wenning, RMP/EPCRA (SAIC) Inspector
REPORT DATE: September 24, 2009

I. FACILITY NAME: JCI Jones Chemicals, Inc. – Torrance Facility

II. FACILITY ADDRESS: 1401 West Del Amo Boulevard, Torrance, CA

III. DATE OF INSPECTION: June 12, 2009 at 9:00 AM

IV. PURPOSE OF INSPECTION

The inspection was conducted as an evaluation of compliance with EPCRA § 302 – 312, CERCLA § 103 and CAA § 112(r)7. This inspection focused on a Program Level 3 Requirements for Risk Management Plan Facilities (RMP) under the CAA, and the related EPCRA /CERCLA hazardous inventory and release reporting requirements. The document review and inspection was conducted at the JCI facility in Torrance, CA, by inspectors Robert Lucas (EPA) and Nancy Wenning (SAIC).

V. INSPECTION SUMMARY

OPENING MEETING

Introductions were made and the inspectors presented their credentials. The EPA inspector provided copies and explained the content of the Notice of Inspection, Right to Claim Confidentiality, and Receipt for Documents. The facility representative and EPA inspector signed all copies prior to the end of the inspection, and copies of signed documents were left with the facility.

FACILITY DESCRIPTION

This JCI facility in Torrance, CA is situated on 4.8 acres and primarily manufactures bleach and supplies chemicals that disinfect bulk water systems to protect public health. Chemicals are brought onsite in bulk quantities primarily by rail, repackaged into smaller containers, and then transported to customers on an as-needed basis.

Chlorine and sulfur dioxide (anhydrous) are the regulated substances used at this site with a maximum quantity of 180,000 pounds for sulfur dioxide and 1.8 million pounds for chlorine. The quantity shown on JCI"s original RMP for chlorine was 900,000 pounds, but has been increased to 1.8 million pounds due to recent policy

changes made by the Transportation Security Administration (TSA) regarding railroad systems requiring railcars to be held no longer than 48 hours. As a result, JCI may now have as many as ten railcars (1 railcar contains180,000 pounds x 10 = 1.8 million pounds) loaded with chlorine onsite at any time; JCI recently increased the quantity in their RMP and notified the fire department of this change.

During the inspection, JCI had questions regarding the term 'maximum intended inventory' for RMP requirements, as at another JCI facility on the East Coast, an EPA inspector had defined this as 'the single largest storage capacity on site of each product'. JCI authorities questioned this as they had always taken into account any storage vessel that contained a regulated substance. Nonetheless they notified their facilities of this 'change' and requested them to correct their maximum intended inventory amounts. Following the inspection, EPA inspector Robert Lucas verified with the EPA Region 9 authorities that JCI's original interpretation was correct. Mr. Lucas notified JCI (attached under Facility Documents) that the guidance refers to 'any vessel in which you store or process a regulated substance above its threshold quantity.' Per the understanding, JCI facility made the necessary corrections to their RMP/PSM.

At the time of the inspection, the facility appeared to be well operated and maintained. Documents requested during the inspection were readily available, and found to be very comprehensive and satisfactory upon review. JCI's three latest Hazardous Material Disclosures with Business Plans were reviewed and verified onsite by the inspectors and deemed satisfactory. Copies of these documents were not requested and are not included as attachments. No potential violations were found at this facility at the time of inspection.

CLOSING MEETING

A closing meeting was held and the facility was informed that no potential violations were found during the inspection.

VI. SUMMARY OF FINDINGS

EPCRA 302-312/CERCLA 103: No potential violations were found at the time of inspection.

CAA 112(r)(7): No potential RMP Program Level 3 violations were found at the time of inspection.

VII. ATTACHMENTS

1. EPCRA § 302-312 / CERCLA § 103 Inspection Checklist
2. Risk Management Program Level 3 Process Checklist and CAA § 112(r)7

Findings
3. Signed Notice of Inspection Forms
4. Receipt of Notice of Right to Claim Confidentiality
5. Receipt of Documents
6. Digital Camera Photo Log – Archival Images
7. Facility Documents

Digital Camera Photo Log – Archival Images

Facility Name: JCI Jones Chemicals, Inc.

Facility Address: 1401 West Del Amo Blvd., Torrance, CA 90501

Facility ID #: 1000 0014 1394

Date: June 12, 2009

Page: 1 of 2

Photographer: Nancy Wenning

Latitude: 33.847534

Longitude: -118.301613

Photo #	Time	Map location	Direction	Description	CBI?
1 	1000			One ton chlorine filling station.	
2 	1000			Chlorine cylinder filling station.	
3 	1000			Top of railcar – chlorine unloading.	
4 	1000			Sulfur dioxide filling station.	
5 	1000			Railcar valve closure system.	
6 	1000			Plant mitigation system.	

7 	1000			Sodium hypochlorite tank farm.	

Photograph Log
JCI Jones Chemicals, Inc., Torrance, CA
Inspection Date: June 12th, 2009

Photo 1 – One ton chlorine filling station

Photo 2 – Chlorine cylinder filling station

Photo 3 – Top of railcar – chlorine unloading

Photo 4 – Sulfur dioxide filling station

Enforcement Confidential

Photograph Log
JCI Jones Chemicals, Inc., Torrance, CA
Inspection Date: June 12th, 2009

Photo 5 – Railcar valve closure system

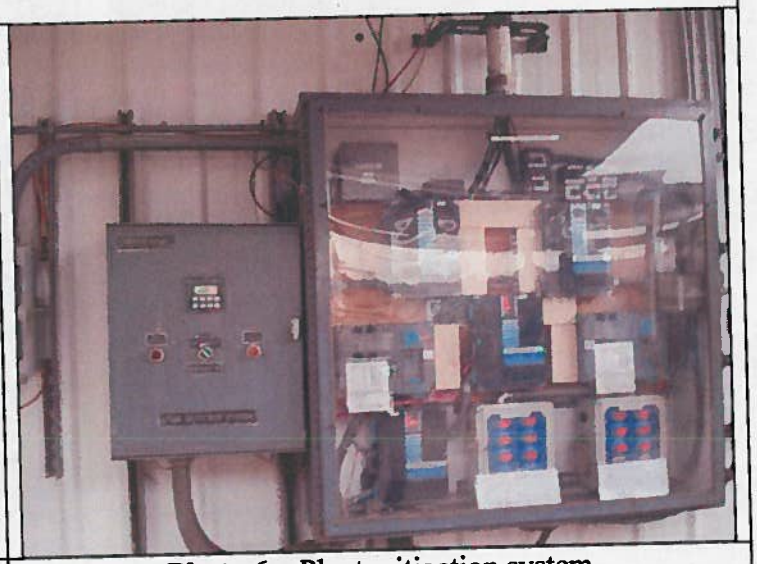

Photo 6 – Plant mitigation system

Photo 7 – Sodium hypochlorite tank farm

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET

Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

Date RMP Re-submitted: 11/27/2006 **[CA 2740.1]**

Date process(es) came online: 1956

Section A-Management [68.15] [CA 2735.6]

Management system developed and implemented as provided in 40 CFR 68.15 [CA 2735.6] ☒S ☐M ☐U ☐N/A

Comments:

Has the owner or operator:	
1. Developed a management system to oversee the implementation of the risk management program elements? [68.15(a)] [CA 2735.6(a)]	☒Y ☐N ☐N/A
2. Assigned a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements? [68.15(b)] [CA 2735.6(b)]	☒Y ☐N ☐N/A
3. Documented other persons responsible for implementing individual requirements of the risk management program and defined the lines of authority through an organization chart or similar document? [68.15(c)] [CA 2735.6(c)]	☒Y ☐N ☐N/A

Section B: Hazard Assessment [68.20-68.42] [CA 2750.1]

Hazard assessment conducted and documented as provided in 40 CFR 68.20-68.42 [CA 2750.1]? ☒S ☐M ☐U ☐N/A

Comments:

Hazard Assessment: Offsite consequence analysis parameters [68.22] [CA2750.2]

1. Used the following endpoints for offsite consequence analysis for a worst-case scenario: [68.22(a)] [CA 2750.2(a)] ☒ a. For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)] [CA 2750.2 (a)(1)(2)(3)] ☐ b. For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)] [CA 2750.2(a)(4)(A)] or ☐ c. For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m^2 for 40 seconds? [68.22(a)(2)(ii)] [CA 2750.2(a)(4)(B)] or ☐ d. For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)] [CA 2750.2(a)(4)(C)]	☒Y ☐N ☐N/A
2. Used the following endpoints for offsite consequence analysis for an alternative release scenario: [68.22(a)] [CA 2750.2(a)] ☒ a. For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)] [CA 2750.2(a)(1)(2)(3)] ☐b. For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)] [CA 2750.2(a)(4)(A)] ☐c. For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m2 for 40 seconds? [68.22(a)(2)(ii)] [CA 2750.2(a)(4)(B)] ☐d. For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)] [CA 2750.2(a)(4)(C)]	☒Y ☐N ☐N/A
3. Used appropriate wind speeds and stability classes for the release analysis? [68.22(b)] [CA 2750.2(b)]	☒Y ☐N ☐N/A
4. Used appropriate ambient temperature and humidity values for the release analysis? [68.22(c)] [CA 2750.2(c)]	☒Y ☐N ☐N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

5. Used appropriate values for the height of the release for the release analysis? [68.22(d)] [CA 2750.2(d)]	☒Y ☐N ☐N/A
6. Used appropriate surface roughness values for the release analysis? [68.22(e)] [CA 2750.2 (e)]	☒Y ☐N ☐N/A
7. Do tables and models, used for dispersion analysis of toxic substances, appropriately account for dense or neutrally buoyant gases? [68.22(f) [CA 2750.2(f)]	☒Y ☐N ☐N/A
8. Were liquids, other than gases liquefied by refrigeration only, considered to be released at the highest daily maximum temperature, based on data for the previous three years appropriate for a stationary source, or at process temperature, whichever is higher? [68.22(g)] [CA 2750.2(g)]	☒Y ☐N ☐N/A
Hazard Assessment: Worst-case release scenario analysis [68.25] [CA 2750.3]	
9. Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated toxic substance from covered processes under worst-case conditions? [68.25(a)(2)(i)] [CA 2750.3(a)(2)(A)]	☒Y ☐N ☐N/A
10. Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated flammable substance from covered processes under worst-case conditions? [68.25(a)(2)(ii)] [CA 2750.3(a)(2)(B)]	☐Y ☐N ☒N/A
11. Analyzed and reported in the RMP additional worst-case release scenarios for a hazard class if the a worst-case release from another covered process at the stationary source potentially affects public receptors different from those potentially affected by the worst-case release scenario developed under 68.25(a)(2)(i) or 68.25(a)(2)(ii)? [68.25(a)(2)(iii)] [CA 2750.3(a)(2)(C)]	☐Y ☐N ☒N/A
12. Has the owner or operator determined the worst-case release quantity to be the greater of the following: [68.25(b)] [CA 2750.3(b)] ☒ a. If released from a vessel, the greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity? [68.25(b)(1)] [CA 2750.3(b)(1)] ☐b. If released from a pipe, the greatest amount held in the pipe, taking into account administrative controls that limit the maximum quantity? [68.25(b)(2)] [CA 2750.3(b)(2)]	☒Y ☐N ☐N/A
13a. Has the owner or operator for toxic substances that are normally gases at ambient temperature and handled as a gas or liquid under pressure :	
13.a.(1) Assumed the whole quantity in the vessel or pipe would be released as a gas over 10 minutes? [68.25(c)(1)] [CA 2750.3(c)(1)]	☒Y ☐N ☐N/A
13.a.(2) Assumed the release rate to be the total quantity divided by 10, if there are no passive mitigation systems in place? [68.25(c)(1)] [CA 2750.3(c)(1)]	☒Y ☐N ☐N/A
13.b. Has the owner or operator for toxic gases handled as refrigerated liquids at ambient pressure:	
13.b.(1) Assumed the substance would be released as a gas in 10 minutes, if not contained by passive mitigation systems or if the contained pool would have a depth of 1 cm or less? [68.25(c)(2)(i)] [CA 2750.3(c)(2)(A)]	☐Y ☐N ☒N/A
13.b.(2) [Optional for owner / operator] Assumed the quantity in the vessel or pipe would be spilled instantaneously to form a liquid pool, if the released substance would be contained by passive mitigation systems in a pool with a depth greater than 1 cm? [68.25(c)(2)(ii)] [CA 2750.3(c)(2)(B)]	☐Y ☐N ☒N/A
13.b.(3) Calculated the volatilization rate at the boiling point of the substance and at the conditions specified in 68.25(d)? [68.25(c)(2)(ii)] [CA 2750.3(c)(2)(B)]	☐Y ☐N ☒N/A
13.c. Has the owner or operator for toxic substances that are normally liquids at ambient temperature:	
13.c.(1) Assumed the quantity in the vessel or pipe would be spilled instantaneously to form a liquid pool? [68.25(d)(1)] [CA 2750.3(d)(1)]	☐Y ☐N ☒N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

13.c.(2) Determined the surface area of the pool by assuming that the liquid spreads to 1 cm deep, if there is no passive mitigation system in place that would serve to contain the spill and limit the surface area, or if passive mitigation is in place, the surface area of the contained liquid shall be used to calculate the volatilization rate? [68.25(d)(1)(i)] [CA 2750.3(d)(1)(A)]	☐Y ☐N ☒ N/A
13.c.(3) Taken into account the actual surface characteristics, if the release would occur onto a surface that is not paved or smooth? [68.25(d)(1)(ii)] [CA 2750.3(d)(1)(B)]	☐Y ☐N ☒ N/A
13.c.(4) Determined the volatilization rate by accounting for the highest daily maximum temperature in the past three years, the temperature of the substance in the vessel, and the concentration of the substance if the liquid spilled is a mixture or solution? [68.25(d)(2)] [CA 2750.3(d)(2)]	☐Y ☐N ☒ N/A
13.c.(5) Determined the rate of release to air from the volatilization rate of the liquid pool? [68.25(d)(3)] [CA 2750.3(d)(3)]	☐Y ☐N ☒ N/A
13.c.(6) Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(d)(3)] [CA 2750.3(d)(3)]	☐Y ☐N ☒ N/A
13.d. Has the owner or operator for flammables:	
13.d.(1) Assumed the quantity in a vessel(s) of flammable gas held as a gas or liquid under pressure or refrigerated gas released to an undiked area vaporizes resulting in a vapor cloud explosion? [68.25(e)] [CA 2750.3(e)(2)(A)]	☐Y ☐N ☒ N/A
13.d.(2) For refrigerated gas released to a contained area or liquids released below their atmospheric boiling point, assumed the quantity volatilized in 10 minutes results in a vapor cloud? [68.25(f)] [CA 2750.3(e)(2)(A)(B)]	☐Y ☐N ☒ N/A
13.d.(3) Assumed a yield factor of 10% of the available energy is released in the explosion for determining the distance to the explosion endpoint, if the model used is based on TNT-equivalent methods? [68.25(e)] [CA 2750.3(f)]	☐Y ☐N ☒ N/A
14. Used the parameters defined in 68.22 to determine distance to the endpoints? [68.25(g)] [CA 2750.3(g)]	☒Y ☐N ☐ N/A
15. Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(g)] [CA 2750.3(g)] a. What modeling technique did the owner or operator use? [68.25(g)] [CA 2750.3(g)] EPA's RMP Comp	☒Y ☐N ☐ N/A
16. Ensured that the passive mitigation system, if considered, is capable of withstanding the release event triggering the scenario and will still function as intended? [68.25(h)] [CA 2750.3(h)]	☐Y ☐N ☒ N/A
17. Considered also the following factors in selecting the worst-case release scenarios: [68.25(i)] [CA 2750.3(i)] ☐a. Smaller quantities handled at higher process temperature or pressure? [68.25(i)(1)] [CA 2750.3(i)(1)] ☒b. Proximity to the boundary of the stationary source? [68.25(i)(2)] [CA 2750.3(i)(2)]	☒Y ☐N ☐ N/A
Hazard Assessment: Alternative release scenario analysis [68.28] [CA 2750.4]	
18. Identified and analyzed at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes? [68.28(a)] [CA 2750.4(a)]	☒Y ☐N ☐ N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

19. Selected a scenario: [68.28(b)] [CA 2750.4(b)] ☐a. That is more likely to occur than the worst-case release scenario under 68.25? [68.28(b)(1)(i)] [CA 2750.4(b)(1)(A)] ☒b. That will reach an endpoint off-site, unless no such scenario exists? [68.28(b)(1)(ii)] [CA 2750.4(b)(1)(B)]	☒Y ☐N ☐N/A
20. Considered release scenarios which included, but are not limited to, the following: [68.28(b)(2)] [CA 2750.4(b)(2)] ☒ a. Transfer hose releases due to splits or sudden hose uncoupling? [68.28(b)(2)(i)] CA 2750.4(b)(2)(A)] ☐ b. Process piping releases from failures at flanges, joints, welds, valves and valve seals, and drains or bleeds? [68.28(b)(2)(ii)] CA 2750.4(b)(2)(B)] ☐ c. Process vessel or pump releases due to cracks, seal failure, or drain, bleed, or plug failure? [68.28(b)(2)(iii)] CA 2750.4(b)(2)(C)] ☒ d. Vessel overfilling and spill, or overpressurization and venting through relief valves or rupture disks? [68.28(b)(2)(iv)] CA 2750.4(b)(2)(D)] ☐ e. Shipping container mishandling and breakage or puncturing leading to a spill? [68.28(b)(2)(v)] CA 2750.4(b)(2)(E)]	☒Y ☐N ☐N/A
21. Used the parameters defined in 68.22 to determine distance to the endpoints? [68.28(c)] [CA 2750.4(c)]	☒Y ☐N ☐N/A
22. Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.28(c)] [CA 2750.4(c)]	☒Y ☐N ☐N/A
23. Ensured that the passive and active mitigation systems, if considered, are capable of withstanding the release event triggering the scenario and will be functional? [68.28(d)] [CA 2750.4(d)]	☒Y ☐N ☐N/A
24. Considered the following factors in selecting the alternative release scenarios: [68.28(e)] [CA 2750.4(e)] ☐ a. The five-year accident history provided in 68.42? [68.28(e)(1)] [CA 2750.4(e)(1)] ☒ b. Failure scenarios identified under 68.67? [68.28(e)(2)] [CA 2750.4(e)(2)]	☒Y ☐N ☐N/A
Hazard Assessment: Defining off-site impacts–Population [68.30] [CA 2750.5]	
25. Estimated population that would be included in the distance to the endpoint in the RMP based on a circle with the point of release at the center? [68.30(a)] [CA 2750.5(a)]	☒Y ☐N ☐N/A
26. Identified the presence of institutions, parks and recreational areas, major commercial, office, and industrial buildings in the RMP? [68.30(b)] [CA 2750.5(b)]	☒Y ☐N ☐N/A
27. Used most recent Census data, or other updated information to estimate the population? [68.30(c)] [CA 2750.5(c)]	☒Y ☐N ☐N/A
28. Estimated the population to two significant digits? [68.30(d)] [CA 2750.5(d)]	☒Y ☐N ☐N/A
Hazard Assessment: Defining off-site impacts–Environment [68.33] [CA 2750.6]	
29. Identified environmental receptors that would be included in the distance to the endpoint based on a circle with the point of release at the center? [68.33(a)] [CA 2750.6(a)]	☒Y ☐N ☐N/A
30. Relied on information provided on local U.S.G.S. maps, or on any data source containing U.S.G.S. data to identify environmental receptors? [Source may have used LandView to obtain information] [68.33(b)] [CA 2750.6(b)]	☒Y ☐N ☐N/A
Hazard Assessment: Review and update [68.36] [CA 2750.7]	
31. Reviewed and updated the off-site consequence analyses at least once every five years? [68.36(a)] [CA 2750.7(a)]	☒Y ☐N ☐N/A
32. Completed a revised analysis and submit a revised RMP within six months of a change in processes, quantities stored or handled, or any other aspect that might reasonably be expected on increase or decrease the distance to the endpoint by a factor of two or more? [68.36(b)] [CA 2750.7(b)]	☒Y ☐N ☐N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

Hazard Assessment: Documentation [68.39] [CA 2750.8] Has the owner/operator maintained the following records:	
33. For worst-case scenarios: a description of the vessel or pipeline and substance selected, assumptions and parameters used, the rationale for selection, and anticipated effect of the administrative controls and passive mitigation on the release quantity and rate? [68.39(a)] [CA 2750.8(a)]	☒Y ☐N ☐N/A
34. For alternative release scenarios: a description of the scenarios identified, assumptions and parameters used, the rationale for the selection of specific scenarios, and anticipated effect of the administrative controls and mitigation on the release quantity and rate? [68.39(b)] [CA 2750.8(b)]	☒Y ☐N ☐N/A
35. Documentation of estimated quantity released, release rate, and duration of release? [68.39(c)] [CA 2750.8(c)]	☒Y ☐N ☐N/A
36. Methodology used to determine distance to endpoints? [68.39(d)] [CA 2750.8(d)]	☒Y ☐N ☐N/A
37. Data used to estimate population and environmental receptors potentially affected? [68.39(e)] [CA 2750.8(e)]	☒Y ☐N ☐N/A
Hazard Assessment: Five-year accident history [68.42] [CA 2750.9]	
38. Has the owner or operator included all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage? [68.42(a)] [CA 2750.9(a)]	☐Y ☐N ☒N/A
39. Has the owner or operator reported the following information for each accidental release: [68.42(b)] [CA 2750.9(b)] ☐ a. Date, time, and approximate duration of the release? [68.42(b)(1)] [CA 2750.9(b)(1)] ☐ b. Chemical(s) released? [68.42(b)(2)] [CA 2750.9(b)(2)] ☐ c. Estimated quantity released in pounds and percentage weight in a mixture (toxics)? [68.42(b)(3)] [CA 2750.9(b)(3)] ☐ d. NAICS code for the process? [68.42(b)(4)] [CA 2750.9(b)(4)] ☐ e. The type of release event and its source? [68.42(b)(5)] [CA 2750.9(b)(5)] ☐ f. Weather conditions (if known)? [68.42(b)(6)] [CA 2750.9(b)(6)] ☐ g. On-site impacts? [68.42(b)(7)] [CA 2750.9(b)(7)] ☐ h. Known offsite impacts? [68.42(b)(8)] [CA 2750.9(b)(8)] ☐ i. Initiating event and contributing factors (if known)? [68.42(b)(9)] [CA 2750.9(b)(9)] ☐ j. Whether offsite responders were notified (if known)? [68.42(b)(10)] [CA 2750.9(b)(10)] ☐ k. Operational or process changes that resulted from investigation of the release? [68.42(b)(11)] [CA 2750.9(b)(11)]	☐Y ☐N ☒N/A
Section C: Prevention Program	
Implemented the Program 3 prevention requirements as provided in 40 CFR 68.65 - 68.87? [CA 2760.1-2760.12] Comments	☒S ☐Y ☐N ☐N/A
Prevention Program- Process Safety information [68.65] [CA 2760.1]	
1. Has the owner or operator compiled written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process, before conducting any process hazard analysis required by the rule? [68.65(a)] [CA 2760.1(a)] Does the process safety information contain the following for hazards of the substances: [68.65(b)] [CA 2760.1(b)] ☒ a. Toxicity information? [68.65(b)(1)] [CA 2760.1(b)(1)] ☒ b. Permissible exposure limits? [68.65(b)(2)] [CA 2760.1(b)(2)] ☒ c. Physical data? [68.65(b)(3)] [CA 2760.1(b)(3)] ☒ d. Reactivity data? [68.65(b)(4)] [CA 2760.1(b)(4)] ☒ e. Corrosivity data? [68.65(b)(5)] [CA 2760.1(b)(5)] ☒ f. Thermal and chemical stability data? [68.65(b)(6)] [CA 2760.1(b)(6)] ☒ g. Hazardous effects of inadvertent mixing of materials that could foreseeably occur? [68.65(b)(7)] [CA 2760.1(b)(7)]	☒Y ☐N ☐N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

2. Has the owner documented information pertaining to technology of the process? ₦ A block flow diagram or simplified process flow diagram? [68.65(c)(1)(i)] [CA 2760.1(c)(1)(A)] ₦ Process chemistry? [68.65(c)(1)(ii)] [CA 2760.1(c)(1)(B)] ₦ Maximum intended inventory? [68.65(c)(1)(iii)] [CA 2760.1(c)(1)(C)] ₦ Safe upper and lower limits for such items as temperatures, pressures, flows, or compositions? [68.65(c)(1)(iv)] [CA 2760.1(c)(1)(D)] ₦ An evaluation of the consequences of deviation? [68.65(c)(1)(iv)] [CA 2760.1(c)(1)(E)] ₦ Does the process safety information contain the following for the equipment in the process: [68.65(d)(1)] [CA 2760.1(d)(1)] ☐ Materials of construction? 68.65(d)(1)(i)] [CA 2760.1(d)(1)(A)] ₦ Piping and instrumentation diagrams [68.65(d)(1)(ii)] [CA 2760.1(d)(1)(B)] ☐ Electrical classification? [68.65(d)(1)(iii)] [CA 2760.1(d)(1)(C)] ₦ Relief system design and design basis? [68.65(d)(1)(iv)] [CA 2760.1(d)(1)(D)] ☐ Ventilation system design? [68.65(d)(1)(v)] [CA 2760.1(d)(1)(E)] ₦ Design codes and standards employed? [68.65(d)(1)(vi)] [CA 2760.1(d)(1)(F)] ☐ Material and energy balances for processes built after June 21, 1999? [68.65(d)(1)(vii)] [CA 2760.1(d)(1)(G)] ₦ Safety systems? [68.65(d)(1)(viii)] [CA 2760.1(d)(1)(H)]	☒Y ☐N ☐N/A
3. Has the owner or operator documented that equipment complies with recognized and generally accepted good engineering practices? [68.65(d)(2)] [CA 2760.1(d)(2)]	☒Y ☐N ☐N/A
4. Has the owner or operator determined and documented that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner? [68.65(d)(3)] [CA 2760.1(d)(3)]	☒Y ☐N ☐N/A
Prevention Program- Process Hazard Analysis [68.67] [CA 2760.2]	
5. Has the owner or operator performed an initial process hazard analysis (PHA), and has this analysis identified, evaluated, and controlled the hazards involved in the process? [68.67(a)] [CA 2760.2(a)]	☒Y ☐N ☐N/A
6. Has the owner or operator determined and documented the priority order for conducting PHAs, and was it based on an appropriate rationale? [68.67(a)] [CA 2760.2(b)]	☒Y ☐N ☐N/A
7. Has the owner used one or more of the following technologies to conduct process PHA: [68.67(b)] ☐ What-if? [68.67(b)(1)] [CA 2760.2(b)(1)]] ☐ Checklist? [68.67(b)(2)] [CA 2760.2(b)(2)] ₦ What-if/Checklist? [68.67(b)(3)] [CA 2760.2(b)(3)]] ₦ Hazard and Operability Study (HAZOP) [68.67(b)(4)] [CA 2760.2(b)(4)] ☐ Failure Mode and Effects Analysis (FMEA) [68.67(b)(5)] [CA 2760.2(b)(5)] ☐ Fault Tree Analysis? [68.67(b)(6)] [CA 2760.2(b)(6)] ☐ An appropriate equivalent methodology? [68.67(b)(7)] [CA 2760.2(b)(7)]	☒Y ☐N ☐N/A
8. Did the PHA address: ₦ The hazards of the process? [68.67(c)(1)] [CA 2760.2(c)(1)] ₦ Identification of any incident which had a likely potential for catastrophic consequences? [68.67(c)(2)] [CA 2760.2(c)(2)] ₦ Engineering and administrative controls applicable to hazards and interrelationships?[68.67(c)(3)] [CA 2760.2(c)(3)] ₦ Consequences of failure of engineering and administrative controls? [68.67(c)(4)] [CA 2760.2(c)(4)] ☐ Stationary source siting? [68.67(c)(5)] [CA 2760.2(c)(5)] ☐ Human factors? [68.67(c)(6)] [CA 2760.2(c)(6)] ₦ An evaluation of a range of the possible safety and health effects of failure of controls? [68.67(c)(7)] [CA 2760.2(c)(7)]	☒Y ☐N ☐N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

9. Was the PHA performed by a team with expertise in engineering and process operations and did the team include appropriate personnel? [68.67(d)] [CA 2760.2(d)]	☒Y ☐N ☐ N/A
10. Has the owner or operator established a system to promptly address the team's findings and recommendations; assured that the recommendations are resolved in a timely manner and documented; documented what actions are to be taken; completed actions as soon as possible; developed a written schedule of when these actions are to be completed; and communicated the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations? [68.67(e)] [CA 2760.2(e)]	☒Y ☐N ☐ N/A
11. Has the PHA been updated and revalidated by a team every five years after the completion of the initial PHA to assure that the PHA is consistent with the current process? [68.67(f)] [CA 2760.2(f)]	☒Y ☐N ☐ N/A
12. Has the owner or operator retained PHAs and updates or revalidations for each process covered, as well as the resolution of recommendations for the life of the process? [68.67(g)] [CA 2760.2(g)]	☒Y ☐N ☐ N/A
Prevention Program- Operating procedures [68.69] [CA 2760.3]	
13. Has the owner or operator developed and implemented written operating procedures that provides instructions or steps for conducting activities associated with each covered process consistent with the safety information? [68.69(a)] [CA 2760.3(a)]	☒Y ☐N ☐ N/A
14. Do the procedures address the following: [68.69(a)] [CA 2760.3(a)] ☐ Steps for each operating phase: [68.69(a)(1)] [CA 2760.3(a)(1)] ₦ Initial Startup? [68.69(a)(1)(i)] [CA 2760.3(a)(1)(A)] ₦ Normal operations? [68.69(a)(1)(ii)] [CA 2760.3(a)(1)(B)] ₦ Temporary operations? [68.69((a)(1)(iii)] [CA 2760.3(a)(1)(C)] ₦ Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner? [68.69(a)(1)(iv)] [CA 2760.3(a)(1)(D)] ₦ Emergency operations? [68.69(a)(1)(v)] [CA 2760.3(a)(1)(E)] ₦ Normal shutdown? [68.68(a)(1)(vi)] [CA 2760.3(a)(1)(F)] ₦ Startup following a turnaround, or after emergency shutdown? [68.69(a)(1)(vii)] [CA 2760.3(a)(1)(G)] ☐ Operating limits: [68.68(a)(2)] [CA 2760.3(a)(2)] ₦ Consequences of deviations [68.69(a)(2)(i)] [CA 2760.3(a)(2)(A)] ₦ Steps required to correct or avoid deviation?[68.69(a)(2)(ii) [CA 2760.3(a)(2)(B)] ☐ Safety and health considerations: [68.69(a)(3)] [CA 2760.3(a)(3)] ₦ Properties of, and physical hazards presented by, the chemicals used in the process[68.69(a)(3)(i)] [CA 2760.3(a)(3)(A)] ₦ Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment? [68.69(a)(3)(ii)] [CA 2760.3(a)(3)(B)] ₦ Control measures to be taken if physical contact or airborne exposure occurs? [68.69(a)(3)(iii)] [CA 2760.3(a)(3)(C)] ₦ Quality control for raw materials and control of hazardous chemical inventory levels? [68.69(a)(3)(iv)] [CA 2760.3(a)(3)(D)] ₦ Any special or unique hazards? [68.69(a)(3)(v)] [CA 2760.3(a)(3)(E)] ₦ Safety systems and their functions? [68.69(a)(4)] [CA 2760.3(a)(4)]	☒Y ☐N ☐ N/A
15. Are operating procedures readily accessible to employees who are involved in a process? [68.69(b)] [CA 2760.3(b)]	☒Y ☐N ☐ N/A
16. Has the owner or operator certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary?[68.69(c)] [CA 2760.3(c)]	☒Y ☐N ☐ N/A
17. Has the owner or operator developed and implemented safe work practices to provide for the control of hazards during specific operations, such as lockout/tagout? [68.69(d)] [CA 2760.3(d)]	☒Y ☐N ☐ N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

Prevention Program - Training [68.71] [CA 2760.4]	
18. Has each employee involved in operating a process, and each employee before being involved in operating a newly assigned process, been initially trained in an overview of the process and in the operating procedures?[68.71(a)(1)] [CA 2760.4(a)(1)]	☒Y ☐N ☐N/A
19. Did initial training include emphasis on safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks? [68.71(a)(1)] [CA 2760.4(a)(1)]	☒Y ☐N ☐N/A
20. In lieu of initial training for those employees already involved in operating a process on June 21, 1999, an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures [68.71(a)(2)] [CA 2760.4(a)(2)]	☒Y ☐N ☐N/A
21. Has refresher training been provided at least every three years, or more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process? [68.71(b)] [CA 2760.4(b)]	☒Y ☐N ☐N/A
22. Has owner or operator ascertained and documented in record that each employee involved in operating a process has received and understood the training required?] [CA 2760.4(c)]	☒Y ☐N ☐N/A
23. Does the prepared record contain the identity of the employee, the date of the training, and the means used to verify that the employee understood the training? [68.71(c)] [CA 2760.4(c)]	☒Y ☐N ☐N/A
Prevention Program - Mechanical Integrity [68.73] [CA 2760.5]	
24. Has the owner or operator established and implemented written procedures to maintain the on-going integrity of the process equipment listed in 68.73(a)? [68.73(b)] [CA 2760.5(b)]	☒Y ☐N ☐N/A
25. Has the owner or operator trained each employee involved in maintaining the on-going integrity of process equipment? [68.73(c)] [CA 2760.5(c)]	☒Y ☐N ☐N/A
26. Performed inspections and tests on process equipment? [68.73(d)(1)] [CA 2760.5(d)(1)]	☒Y ☐N ☐N/A
27. Followed recognized and generally accepted good engineering practices for inspections and testing procedures? [68.73(d)(2)] [CA 2760.5(d)(2)]	☒Y ☐N ☐N/A
28. Ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers' recommendations, good engineering practices, and prior operating experience? [68.73(d)(3)] [CA 2760.5(d)(3)]	☒Y ☐N ☐N/A
29. Documented each inspection and test that had been performed on process equipment, which identifies the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test? [68.73(d)(4)] [CA 2760.5(d)(4)]	☒Y ☐N ☐N/A
30. Corrected deficiencies in equipment that were outside acceptable limits defined by the process safety information before further use or in a safe and timely manner when necessary means were taken to assure safe operation? [68.73(e)] [CA 2760.5(e)]	☒Y ☐N ☐N/A
31. Assured that equipment as it was fabricated is suitable for the process application for which it will be used in the construction of new plants and equipment? [68.73(f)(1)] [CA 2760.5(f)(1)]	☒Y ☐N ☐N/A
32. Performed appropriate checks and inspections to assure that equipment was installed properly and consistent with design specifications and the manufacturer's instructions? [68.73(f)(2)] [CA 2760.5(f)(2)]	☒Y ☐N ☐N/A
33. Assured that maintenance materials, spare parts and equipment were suitable for the process application for which they would be used? [68.73(f)(3)] [CA 2760.5(f)(3)]	☒Y ☐N ☐N/A
Prevention Program - Management Of Change [68.75] [CA 2760.6]	
34. Has the owner or operator established and implemented written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process? [68.75(a)] [CA 2760.6(a)]	☒Y ☐N ☐N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

35. Do procedures assure that the following considerations are addressed prior to any change: [68.75(b)] [CA 2760.6(b)] ₦ The technical basis for the proposed change? [68.75(b)(1)] [CA 2760.6(b)(1)] ₦ Impact of change on safety and health? [68.75(b)(2)] [CA 2760.6(b)(2)] ₦ Modifications to operating procedures? [68.75(b)(3)] [CA 2760.6(b)(3)] ₦ Necessary time period for the change? [68.75(b)(4)] [CA 2760.6(b)(4)] ₦ Authorization requirements for the proposed change? [68.75(b)(5)] [CA 2760.6(b)(5)]	☒Y ☐N ☐N/A
36. Were employees, involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, informed of, and trained in, the change prior to start-up of the process or affected parts of the process? [68.75(c)] [CA 2760.6(c)]	☒Y ☐N ☐N/A
37. If a change resulted in a change in the process safety information, was such information updated accordingly? [68.75(d)] [CA 2760.6(d)]	☒Y ☐N ☐N/A
38. If a change resulted in a change in the operating procedures or practices, had such procedures or practices been updated accordingly? [68.75(e)] [CA 2760.6(e)]	☒Y ☐N ☐N/A
Prevention Program - Pre-startup Safety Review [68.77] [CA 2760.7]	
39. Did the pre-startup safety review confirm that prior to the introduction of a regulated substance to a process: [68.77(b)] [CA 2760.7(b) ₦ Construction and equipment was in accordance with design specifications? [68.77(b)(1)] [CA 2760.7(b)(1)] ₦ Safety, operating, maintenance, and emergency procedures were in place and were adequate? [68.77(b)(2)] [CA 2760.7(b)(2)] ₦ For new stationary sources, a process hazard analysis had been performed and recommendations had been resolved or implemented before startup? [68.77(b)(3)] [CA 2760.7(b)(3)] ₦ Modified stationary sources meet the requirements contained in management of change? [68.77(b)(3)] [CA 2760.7(b)(3)] ₦ Training of each employee involved in operating a process had been completed? [68.77(b)(4)] [CA 2760.7(b)(4)]	☒Y ☐N ☐N/A
Prevention Program - Compliance audits [68.79] [CA 2760.8]	
1. Has the owner or operator certified that the stationary source has evaluated compliance with the provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and being followed? [68.79(a)] [CA 2760.8(a)]	☒Y ☐N ☐N/A
2. Has the audit been conducted by at least one person knowledgeable in the process? [68.79(b)] [CA 2760.8(b)]	☒Y ☐N ☐N/A
3. Are the audit findings documented in a report? [68.79(c)] [CA 2760.8(c)]	☒Y ☐N ☐N/A
4. Has the owner or operator promptly determined and documented an appropriate response to each of the findings of the audit and documented that deficiencies had been corrected? [68.79(d)] [CA 2760.8(d)]	☒Y ☐N ☐N/A
5. Has the owner or operator retained the two most recent compliance reports? [68.79(e)] [CA 2760.8(e)]	☒Y ☐N ☐N/A
Prevention Program - Incident investigation [68.81] [CA 2760.9]	
1. Has the owner or operator investigated each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance? [68.81(a)] [CA 2760.9(a)]	☐Y ☐N ☒N/A
2. Were all incident investigations initiated not later than 48 hours following the incident? [68.81(b)] [CA 2760.9(b)]	☐Y ☐N ☒N/A
3. Was an accident investigation team established and did it consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of a contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident? [68.81(c)] [CA 2760.9(c)]	☐Y ☐N ☒N/A
4. Was a report prepared at the conclusion of every investigation?[68.81(d)] [CA 2760.9(d)]	☐Y ☐N ☒N/A

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

5. Does every report include: [68.81(d)] [CA 2760.9(d)] ☐ Date of incident? [68.81(d)(1)] [CA 2760.9(d)(1)] ☐ Date investigation began? [68.81(d)(2)] [CA 2760.9(d)(2)] ☐ A description of the incident? [68.81(d)(3)] [CA 2760.9(d)(3)] ☐ The factors that contributed to the incident? [68.81(d)(4)] [CA 2760.9(d)(4)] ☐ Any recommendations resulting from the investigation? [68.81(d)(5)] [CA 2760.9(d) (5)]	☐Y ☐N ☒ N/A
6. Has the owner or operator established a system to address and resolve the report findings and recommendations, and are the resolutions and corrective actions documented? [68.81(e)] [CA 2760.9(e)]	☐Y ☐N ☒ N/A
7. Was the report reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable? [68.81(f)] [CA 2760.9(f)]	☐Y ☐N ☒ N/A
8. Has the owner or operator retained the incident investigation reports for five years? [68.81(g)] [CA 2760.9(g)]	☐Y ☐N ☒ N/A
Section D - Employee Participation [68.83] [CA 2760.10]	
1. Has the owner or operator developed a written plan of action regarding the implementation of the employee participation required by this section?[68.83(a)] [CA 2760.10(a)]	☒Y ☐N ☐ N/A
2. Has the owner or operator consulted with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in chemical accident prevention provisions? [68.83(b)] [CA 2760.10(b)]	☒Y ☐N ☐ N/A
3. Has the owner or operator provided to employees and their representatives access to process hazards analyses and to all other information required to be developed under the chemical accident prevention rule? [68.83(c)] [CA 2760.10(c)]	☒Y ☐N ☐ N/A
Section E - Hot Work Permit [68.85] [CA 2760.11]	
1. Has the owner or operator issued a hot work permit for each hot work operation conducted on or near a covered process? [68.85(a)] [CA 2760.11(a)]	☒Y ☐N ☐ N/A
2. Does the permit document that the fire prevention and protection requirements in 29CFR 1910.252(a) have been implemented prior to beginning the hot work operations? [68.85(b)] [CA 2760.11(b)]	☒Y ☐N ☐ N/A
3. Does the permit indicate the date(s) authorized for hot work and the object(s) upon which hot work is to be performed? [68.85(b] [CA 2760.11(b)]	☒Y ☐N ☐ N/A
4. Are the permits being kept on file until completion of the hot work operations? [68.85(b)] [CA 2760.11(b)]	☒Y ☐N ☐ N/A
Section F - Contractors [68.87] [CA 2760.12] *Facility has no contractors on covered processes, but has a program in place.*	
1. Has the owner or operator obtained and evaluated information regarding the contract owner or operator's safety performance and programs when selecting a contractor? [68.87(b)(1)] [CA 2760.12(b)(1)]	☐Y ☐N ☒ N/A
2. Informed contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process? [68.87(b)(2)] [CA 2760.12(b)(2)]	☐Y ☐N ☒ N/A
3. Explained to the contract owner or operator the applicable provisions of the emergency response or the emergency action program? [68.87(b)(3)] [CA 2760.12(b)(3)]	☐Y ☐N ☒ N/A
4. Developed and implemented safe work practices consistent with §68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in the covered process areas? [68.87(b)(4)] [CA 2760.12(b)(4)]	☐Y ☐N ☒ N/A
Section G - Emergency Response [68.90 - 68.95] [CA 2765.2]	
Developed and implemented an emergency response program as provided in 40 CFR 68.90-68.95? N/A Comments:	☒S ☐M ☐U ☐

RISK MANAGEMENT PROGRAM INSPECTION FINDINGS, ALLEGED VIOLATIONS AND PROPOSED PENALTY SHEET
Program Level 3 Process Checklist

Facility Name: JCI Jones Chemicals, Inc.

1. An emergency response plan which is maintained at the stationary source and contains the following? [68.95(a)(1)] [CA 2765.2(a)(1)] ☒ a. Procedures for informing the public and local emergency response agencies about accidental releases? [68.95(a)(1)(i)] [CA 2765.2(a)(1)(A)] ☒ b. Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures? [68.95(a)(1)(ii)] [CA 2765.2(a)(1)(B)] ☒ c. Procedures and measures for emergency response after an accidental release of a regulated substance? [68.95(a)(1)(iii)] [CA 2765.2(a)(1)(C)]	☒Y ☐N ☐N/A
2. Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance? [68.95(a)(2)] [CA 2765.2(a)(2)]	☒Y ☐N ☐N/A
3. Training for all employees in relevant procedures? [68.95(a)(3)] [CA 2765.2(a)(3)]	☒Y ☐N ☐N/A
4. Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes? [68.95(a)(4)] [CA 2765.2(a)(4)]	☒Y ☐N ☐N/A
5. Did the owner or operator use a written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance (''One Plan'')? If so, does the plan include the elements provided in paragraph (a) of 68.95, and also complies with paragraph (c) of 68.95? [68.95(b)] [CA 2765.2(b)]	☒Y ☐N ☐N/A
6. Has the emergency response plan been coordinated with the community emergency response plan developed under EPCRA? [68.95(c)] [CA 2765.2(c)]	☒Y ☐N ☐N/A

NOTICE OF INSPECTION

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region IX

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) §103;
Emergency Planning and Community Right-to-Know Act (EPCRA) §§302-312; and
Clean Air Act §112r Risk Management Program (CAA RMP)

DATE/TIME: June 12, 2009 / 9:10 AM	FACILITY NAME: JCI Jones Chemicals Inc. - Torrance
INSPECTOR (NAME, ADDRESS, PHONE): Robert Lucas US EPA Region 9 (SFD-9-3) 75 Hawthorne St. San Francisco, CA 94105 415 972-3069	FACILITY ADDRESS: 1401 W. Del Amo Blvd. Torrance, CA 90501

REASON FOR INSPECTION: U. S. EPA is conducting this inspection for the purpose of determining compliance with the requirements of Section 103(e) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Sections 302 through 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA), and Section 112(r) of the Clean Air Act (CAA).

The scope of this inspection may include, but is not limited to reviewing and obtaining copies of documents and records; interviews and taking of statements; reviewing of chemical manufacturing, importing, processing, and/or use facilities, including waste handling and treatment operations; taking samples and photographs; and any other inspection activities necessary to determine compliance with the Acts.

INSPECTOR SIGNATURE Robert Lucas		RECIPIENT SIGNATURE D L Casmey	
NAME Robert Lucas		NAME D. L. Casmey	
TITLE EPCRA/RMP Inspector	DATE SIGNED 6/12/09	TITLE Executive VP of Safety, Security and Regulatory Compliance	DATE SIGNED 12 June 09'

RECEIPT OF DOCUMENTS
U.S. ENVIRONMENTAL PROTECTION AGENCY
Region IX

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) §103;
Emergency Planning and Community Right-to-Know Act (EPCRA) §§302-312; and
Clean Air Act §112r Risk Management Program (CAA RMP)

DATE/TIME: June 12, 2009 / 12.30 pm	FACILITY NAME: JCI Jones Chemicals Inc. - Torrance
INSPECTOR (NAME, ADDRESS, PHONE): Robert Lucas US EPA Region 9 (SFD-9-3) 75 Hawthorne St. San Francisco, CA 94105 415 972-3069	FACILITY ADDRESS: 1401 W. Del Amo Blvd. Torrance, CA 90501

During inspection, copies of the following documents were received from the above referenced facilities:

Document Date	Author	Title
7/24/07	JCI Jones Chemicals	Site Map
1/11/08	"	Mitigation Systems
10/12/06	"	PHA Documentation of Actions Taken
6/11/09	"	Design Codes, Engineering Standards, and Practices
5/16/09	"	Maximum Intended Inventory
various	JCI Jones Chemicals	Process Flow Charts

INSPECTOR SIGNATURE Robert Lucas		RECIPIENT SIGNATURE D L Casmey	
NAME Robert Lucas		NAME D.L. Casmey	
TITLE EPCRA/RMP Inspector	DATE SIGNED 6/12/09	TITLE Executive VP of Safety, Security & Regulatory Compliance	DATE SIGNED 12 June 09'

RECEIPT OF NOTICE OF RIGHT TO CLAIM CONFIDENTIALITY

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region IX

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) §103;
Emergency Planning and Community Right-to-Know Act (EPCRA) §§302-312; and
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DATE/TIME: June 12, 2009 / 9:10 AM	FACILITY NAME: JCI Jones Chemicals Inc. - Torrance
INSPECTOR (NAME, ADDRESS, PHONE): Robert Lucas US EPA Region 9 (SFD-9-3) 75 Hawthorne St. San Francisco, CA 94105 415 972-3069	FACILITY ADDRESS: 1401 W. Del Amo Blvd. Torrance, CA 90501

Notice of Right to Claim Confidentiality: You may assert a business confidentiality claim covering all or part of the information requested during the course of this inspection, as provided in 40 C.F.R. §2.203(b). To make a confidentiality claim, submit the requested information and indicate that you are making a claim of confidentiality. Any document over which you make a claim of confidentiality should be marked by either attaching a cover sheet stamped or typed with a legend to indicate the intent to claim confidentiality. The stamp or typed legend or other suitable form of notice should employ language such as "trade secret" or "proprietary" or "company confidential" and indicate a date if any when the information should no longer be treated as confidential.

All confidentiality claims are subject to agency verification and must be made in accordance with 40 C.F.R. §2.208 which provides in part that you satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; and that the information is not and has not been, reasonably obtainable by legitimate means without your consent.

NOTE: Signature of this Receipt of Notice of Right to Claim Confidentiality verifies only that such notice has been received and does not waive that right.

INSPECTOR SIGNATURE Robert Lucas		RECIPIENT SIGNATURE D.L. Casmey	
NAME Robert Lucas		NAME D.L. Casmey	
TITLE: EPCRA/RMP Inspector	DATE SIGNED 6/12/09	TITLE Executive VP of Safety, Security & Regulatory Compliance	DATE SIGNED 12 June 09

XIX. MITIGATION SYSTEMS

A. Introduction

The purpose of this chapter is to discuss the various mitigation systems currently in service at each JCI facility and particularly the role each serves in not only providing for the safety of JCI employees but to minimize if not entirely eliminate any impact on the environment resulting from the unplanned release of any of our hazardous products. The driving force behind the decision to research, select, and install JCI's extensive mitigation systems was the safety of not only JCI employees but the safety of the residents of the communities in which we conduct our business.

The secondary but equally important purpose of this chapter is to thoroughly discuss the procedures to be followed in conducting the daily inspections performed on our various mitigation systems. It should be clearly understood that in order for these systems to operate effectively and provide the benefit for which they were intended, we must clearly understand the purpose of each individual system and how it operates. A system, regardless of the type, either misunderstood or operating incorrectly is not an asset. It is critically important that training be provided to at a minimum, all Plant employees so that they understand the purpose and operation of each system as well as the proper response to the activation of any of the systems. The importance of communication among all Plant employees should also be stressed, as it is possible, although unlikely, that the employee most affected by an alarm may not have even heard it in the first place. The responsibility and proper procedures for responding to an alarm should be clearly understood by all Plant employees, including determining what and why the alarm has sounded. Understanding the purpose of each system as well as what the activation of each signifies will help to ensure that the maximum benefits of each system are achieved.

While descriptions of each component of our mitigation system are also contained in our Risk Management Plan (RMP) and Process Hazardous Analysis (PHA), they are discussed in depth here as well to reinforce the value of each of these systems as vital components of our safety program. Again and as stated above, components of our mitigation system that are either misunderstood or not functioning properly are in all essence, ineffective and for this reason, it is critical to thoroughly understand the purpose and operation of each and every component in the entire system. In reviewing each of these systems, it should become readily apparent that with the exception of the compressed gas sensors, each of the systems serves a preventative or proactive function as opposed to a reactive function. Included also in the discussion below are the procedures to be followed in responding to an activation of any component in the entire mitigation system.

B. Description of Mitigation Systems

The discussion below addresses both the function and operation of the mitigation systems under 'normal' operating conditions.

1. Vacuum Alarm System

The vacuum alarm system is designed to alert Plant employees in the event that the vacuum system fails; i.e., the chlorine and or sulfur dioxide lines are positively pressurized. This can occur as a result of excessive pressure being applied through the vacuum system; i.e., feeding liquid chlorine directly into the vacuum line, or if the vacuum pump shuts down. The loss of this vacuum capability, in the repackaging process, presents several opportunities for accidental product release and particularly while unhooking railcars and containers, notwithstanding other precautionary devices (gauges). The design is simple; a pressure switch (set at 1 lb. PSI for both chlorine and sulfur dioxide) constantly monitors the vacuum line for a vacuum at the point of entry on the fill station side of the vacuum surge ton (vacuum reservoir). If a vacuum is lost due to error or malfunction, the pressure switch will activate an automatic shut-off valve in the vacuum line and activate an audible alarm to alert operators of this abnormal production condition. The fill and process manifolds present the only opportunity for the vacuum line to be positively charged with either chlorine or sulfur dioxide gas. The activation of this alarm does <u>not</u> indicate a release or an emergency condition. An activation of this alarm does, however, provide notification of an abnormal condition and therefore, requires immediate operator and supervisory attention to determine the cause.

The operator(s) will then suspend unhooking containers until a vacuum is restored. As the pressure in the vacuum ton drops, the pressure switch will read this and send a signal to the solenoid that will then open the actuated valve. This process will be automatically repeated until a vacuum has been reestablished in the transfer system. The alarm parameters are as follows:

Chlorine	1 PSI
Sulfur Dioxide	1 PSI

2. Vat Control System

The vat control system is designed to prevent over-chlorination or over-sulfonation of the bleach and sodium bisulfite 'make' vats respectively,

during the manufacturing process. The vat control system monitors both the excess caustic and pH in the bleach blow vat and sodium bisulfite make vat systems respectively as well as the temperature of the product in both systems during the production process and works in two stages. Stage one rings a "production alarm" when the vat has reached pre-set ORP/pH and or temperature readings. The operator then manually shuts down the flow of chlorine or sulfur dioxide, depending on the product being made. The second stage of this system consists of an "emergency shutdown" and also includes an audible alarm. While the set-points for bleach and sodium bisulfite production are set well below and above the product conditions that would cause over-chlorination or over-sulfonation respectively, the system itself will automatically close all actuated valves thereby stopping the flow of chlorine or sulfur dioxide into the vats once the second set of pre-set ORP/pH and or temperature parameters are met. The system is designed such that it cannot be manually reset or overridden as long as the "emergency shutdown" parameters exist. The parameters listed below are fairly representative of those at the Branches but it's important to point out that these settings are not identical at all eleven Branches.

	Production Alarm	Shutdown
Bleach	500 mv (ORP)/85°F	560 mv (ORP)/95°F
Sodium Bisulfite	5.0 s.u. (pH)/110°F	3.5 s.u. (pH)/120°F

As with the railcar monitors, the vat control system must be secured so as to prevent access to either the electrical components inside the cabinets themselves and/or the ORP/temperature controller and pH/temperature settings for the bleach blow vat and the sodium bisulfite make vat systems respectively by anyone other than maintenance personnel and or personnel authorized by the Branch Manager.

Note: In the event of a shutdown due to a chlorine or sulfur dioxide release, we want to retain the ability to open the actuated valves in the blow or liquid lines at the blow (bleach) or make (bleach or sodium bisulfite) vat(s). In order to accomplish this, it is mandatory that a 'bypass' switch be installed that can be used to open the actuated valve in either system in order to avoid a pressure buildup in the piping system. The exception to this of course is if the leak is in the system <u>after</u> the actuated valves; i.e., in the sparger tube(s).

3. Gas Detection System

The railcar monitoring and Plant sensors systems are designed to identify a release of chlorine and/or sulfur dioxide either at the railcar(s) or throughout the Plant and shut down the flow of product at its source (i.e., the railcar, filling stations, container storage area, etc.). **Note:** *The activation of any of the manual e-stops strategically located throughout the Plant will also serve to shut down the flow of product from the railcars to the filling stations, bleach machine (if applicable), and the blow/make vats.* The key component of the gas detection system is the sensors located in close proximity to each railcar, production, and storage areas. The sensors are programmed with two settings as referenced below; a 'warning' condition and a 'shutdown' condition. If a release is detected, the system will sound an alarm indicating that the 'warning' condition has been achieved. Should the release meet the pre-established 'shutdown' conditions, the actuated valves on the railcar, the airlines going into the railcar, the header valve on the main manifold leading into the Plant, and all actuated valves, excluding that on the vacuum alarm system, in the chlorine and sulfur dioxide piping systems throughout the entire Plant will close. The alarms sound and the valves close at the following settings:

	WARNING	SHUTDOWN
Chlorine	1.0 ppm	2.5 ppm
Sulfur Dioxide	2.5 ppm	5.0 ppm

It is important to keep in mind that the conditions that set off the alarms in the first place must be identified and addressed <u>before</u> resetting the system. It is appropriate to note here that the 'warning' parameters may be either 'latching' and 'non-latching' dependent on system equipment design. In a 'latching' configured system, the system must be manually reset but at the same time, can only be reset after the condition causing the alarm has gone away whereas in a 'non-latching' system, the system will reset itself automatically when the condition identified by the sensor goes away. It is also appropriate to note here that the 'shutdown' parameters <u>must</u> be latching. The monitor itself should be secured so as to prevent access to the settings. A "remote" reset button should be mounted externally to the monitor which will eliminate the need to gain access to the system settings unless absolutely necessary. It should be understood that with the exception of maintenance personnel performing system checks or maintenance on the monitors and or designated employees so authorized by the Branch Manager, no one should be permitted to alter system settings.

4. Plant Emergency Stops (E-stops)

In addition to the mitigation system components discussed above that electromechanically monitor and detect shutoff conditions, it may be necessary to initiate a shutdown condition based on prudent and necessary operator observation. For this reason, each JCI facility has installed several Plant Emergency Stops (E-stops or Panic Buttons) that are tied directly into the existing gas mitigation systems. The activation of this system triggers an audible and/or visual alarm. By pushing one of these buttons, an employee can shut down every actuated valve in the entire chlorine and sulfur dioxide transfer system(s) with the exception of the vacuum alarm. Clear and unobstructed access to these buttons is to be maintained at all times. They must also be clearly marked and all employees must be made aware of the location of the E-stop closest to their work stations. Ideally, the E-stops should be located at the primary egress routes from the production building(s).

5. Backflow Prevention System

The purpose of the backflow prevention system is to prevent chlorine or sulfur dioxide from coming back into the "pad" air system and compressor. Being a compressed gas, there is always pressure on a railcar. If the Plant "pad" air system should lose pressure, it would be possible that the car pressure could exceed that of the "pad" air system thus allowing product to back up into the air system. The system is comprised of two (2) actuated valves, a solenoid valve, two (2) pressure differential switches, one pressure switch and a control panel. The pressure differential switches are designed to maintain a pressure differential of greater than or equal to 5 psi on the compressor side relative to the railcar side. The purpose of the pressure switch is to shut off both actuated valves when the pressure at the railcar has reached the pre-determined set point. A pressure differential of less than 5 psi will close both actuated valves. In order for the actuated valves to remain open, both conditions; a pressure differential greater than or equal to 5 psi and less than the pre-determined set point on the railcar side, must exist; otherwise, both valves will remain closed.

Pad Air Side: At least 5 PSI greater than the railcar side.

6. Auto-Dialer Alert System

The auto-dialer alert system is a recent addition to our already comprehensive mitigation system and is designed to augment the Gas Detection System. This system is tied into the gas detection system and

specifically the 'warning' parameter such that during non-working hours and in the event the 'warning' parameter is achieved, a pre-programmed sequence of Branch employee phone numbers will be dialed to provide notification that a sensor has detected gaseous fumes of some type. The responding employee will acknowledge the notification via phone and report to the Branch to determine the source of the problem. As discussed above in paragraph 1 (Railcar Monitoring and Gas Sensors System), the 'warning' parameter may be either 'non-latching'; i.e., the alarm will cease to sound on its own when the condition causing the alarm to sound in the first place has gone away or 'latching', meaning that the system must be manually reset but can only be reset after the condition causing the alarm to sound in the first place has gone away.

7. Ultrasonic Tank Level Monitoring System

All product tanks, to include both storage and production (make) vats, are equipped with ultrasonic tank level monitoring systems. The tank-level monitoring system is designed such that low-level and high-level audible alarms will alert an operator when the tank has reached its pre-set low condition and or high condition set points. In the event of a low level condition, the alarm will help to ensure that pumps are not run dry, thereby damaging them and resulting in costly repairs. The low level condition alarm will signal the need to switch to another tank, shut down the process, or either produce or order more product. Lastly, it will serve as a warning in the event of a tank failure.

The high-level alarm will alert the operator that the tank is almost full or has the desired amount of product in the tank and therefore serves to prevent the tank(s) from being overfilled.

Note: The following points apply to the three mitigation system components discussed above in paragraphs 1, 2, and 3.

a. Once a shutdown condition is reached and the system has shut down, it cannot be reset until the condition causing the activation has been satisfactorily corrected or eliminated.

b. The control panels (quadscans, XPLs, DPLs, ORP/pH controllers) must be secured so as to prevent tampering or unauthorized adjustments to the pre-set parameters by anyone other than either maintenance personnel or employees designated by the Branch Manager, again, while in the course of performing system checks or required maintenance.

c. Systems must be installed in a location such that unobstructed access and viewing is always provided.

d. Systems must be configured such that a controller cannot be reset as long as the condition initiating the shutdown continues to exist.

8. Automatic Scale Shut-off

The purpose of this system is to prevent either a ton or cylinder from being overfilled during the filling process. All ton and cylinder scales operate actuated valves that will shut off the flow of chlorine or sulfur dioxide when the scale has reached a pre-programmed weight. The weight is pre-programmed by the operator and is dependent on the amount of product desired. This system is also equipped with a panic button that will allow an operator to shut down the supply of chlorine or sulfur dioxide to the manifold in case of an emergency. There are a couple of points that should be addressed with those employees responsible for filling tons and cylinders. First, the set points should be checked daily while conducting the scale check. It is important that the indicator is "zeroed" each time before placing the next container onto the scale. To ensure accuracy, the weight reflected on the indicator after connecting the container should be "zeroed" (tare weight) again prior beginning to fill the container. **Note**: At no time during the filling process should the operator leave the area.

C. Mitigation System Component Inspection Requirements

The purpose of this section is to establish inspection procedures to be followed with respect to each of the various components comprising the extensive mitigation system in use throughout JCI Jones Chemicals Inc. It is expected that the employee responsible for conducting the testing on any component of the mitigation system has a thorough and conversant understanding of the purpose and operation of each component in the system. As previously discussed, any component determined not to be functioning properly compromises the safety and security of not only our employees but potentially, the residents of the community in which the Branch is located. Given that the systems at all Branches are for all intents and purposes, identical, standardized inspection procedures applicable to all Branches have been developed and are discussed below.

NOTE: Each individual component of the chorine and sulfur dioxide gas detection equipment, as well as all other mitigation system equipment, is to be checked for proper operability at least once each week unless otherwise specified, in accordance with the procedures outlined below and on the Inspection Checklist

(Confirmation of Operation – Plant Mitigation Systems) found on pages SF XIX 14-15. The results of the inspections conducted each day must be documented on the Inspection Checklist. This inspection checklist is to be faxed or e-mailed to both the Corporate Office (Ryan) and the Executive VP of Operations and Security on Monday of the week following the week indicated on the checklist. An 'Example' of what a completed Checklist may look like can be found on pages SF XIX 16-17. ***Any component determined not to be working properly based either on inspection or through normal use must be reported that day via page SF XIX 14-15. As with previous procedures, this checklist (both pages) must be immediately faxed or e-mailed to both the Corporate Office (Ryan) and the Executive VP of Operations and Security in the event a deficiency is noted.***

Manufacturer's replacement recommendations for chlorine and sulfur dioxide sensors are based on a wide range of uses, and related exposures and conditions. These circumstances are highly variable. As a Company, we have elected to determine the operability of these units without consideration of the replacement time frames recommended by the manufacturer. This weekly testing procedure will determine unit failure before minimum recommended replacement date as well as possibly extending the life of these units beyond the maximum recommended replacement date; i.e., these particular parts will be replaced when an inspection has determined them to be non-functioning.

1. Vacuum Alarm System

This test is to be performed after the chlorine/sulfur dioxide vat system has been started and before the system is used to vacuum any containers and or the liquid lines or disconnect any fill or transfer whips.

To test the system, close the manual valve on the fill station side of the vacuum ton (**If there is no valve in place, one must be installed.**), and at a fill station, open the top valve on a ton or the valve on a cylinder with product in it and then slowly open the vacuum valve on the filling station manifold, allowing the gas to feed slowly into the vacuum line. As you begin to lose the vacuum on the line, the alarm should sound and the actuated valve should close at the switch's adjusted set point. When done with the test, close the valve on the container and open the valve on the vacuum ton. Note that this test may require two operators if the vacuum ton is far away from the fill station.

2. Vat Control System

Bleach/Sodium Bisulfite

a. Temperature test:

This test is to be performed before the flow of chlorine or sulfur dioxide has started and with the cooling system turned off to ensure that vat is at a stable temperature. Take a sample from the vat. Using a thermometer, test the temperature of the sample and compare it to the temperature reading on the controller. Note: This test is applicable to any and all vats in use in accordance with the attached Inspection Checklist (Confirmation of Operation – Plant Mitigation Systems).

b. ORP Test:

Test the bleach in the vat for excess caustic regularly throughout the day and more frequently as the vat is close to being finished. Generally speaking, the alarm should sound when the excess caustic is between 5-10 gpl. As a side note, when the vat is finished, a sample should be tested for its excess caustic level and compared with the ORP reading. You should know, based on experience when testing for excess caustic, what the approximate corresponding reading should be on the ORP controller and you should be able to easily recognize when there is a problem with the controller; i.e., it is not reading properly.

c. ORP Alarms and Actuated Valves:

To test the HI alarm on the ORP controller; i.e., the bleach vat system, change the alarm set point to a number below the current reading on the ORP meter and the alarm should sound as described above in paragraph below.

Do the same for the HI/HI alarm. The alarm should sound and the actuated valves should close.

The best way to explain the test to be conducted to check the ORP's alarm is through an example. Assuming that the set point on the ORP controller is 525 mV and the current reading is 500 mV, change the set point to 425 mV and the alarm should sound. If it does not sound, it should be obvious that there is a problem with the alarm.

Note: Something that isn't thought of much but must be kept in mind is that there is a 'dead band' in the controller on either side of the set point. This is a concern only if you are testing the system when the current reading is fairly close to the alarm settings. In order to ensure the

controller is 'reset' properly after conducting the test and will alarm when the set point is achieved, the controller in the above example must be taken up to 625, entered, and then cycled forward to the correct set point of 525 again and then 'entered' again. If this is not done after conducting the test and instead, the controller is immediately reset to 525 mV, it is very possible that the difference of 25 mV between what the controller is currently reading and what the set point is may constitute a dead band and the alarm won't sound when 525 mV is actually achieved. If the current reading on the controller is not close to what the set points are, this will not be an issue and you can reset the controller directly to the pre-set condition after conducting the test.

The above test must be conducted for both the hi (production) and hi/hi (shutdown) alarm set points. It's important to remember to push the 'reset' button on the controller after each test is completed to ensure the actuated valves are open again for normal operating conditions.

Another point to keep in mind is that if 'AHI' and 'AHH' do not appear on the indicator when the ORP tests are being conducted, then the controller is not configured properly. Any questions regarding this should be addressed with JCI's Director of Maintenance.

d. pH test:

Take a sample from the sodium bisulfite make vat, test it with a pH meter, and compare the results to the reading on the pH controller.

e. pH Alarms and Actuated Valves:

The exact same process for testing the lo and lo/lo alarms on the pH controller; i.e., the sodium bisulfite production system, should be followed as described above for the ORP controller with the exception of the fact that the alarm set points should be changed to a number <u>above</u> the current reading when conducting the tests.

For the temperature check, change the set points to a number below the current reading. **Note**: Check both the warning and shutdown temperature set points.

Each pH and ORP controller is equipped with its own 'E-stop' button. Test the E-stop button by pushing it in. The alarm should sound and the actuated valves in the vat system only should close.

The note above in paragraph c. (ORP Alarms and Actuated Valves) pertaining to dead band also applies to the temperature set points. After conducting the test, take the temperature set point back up and high

enough to eliminate the 'alarm' indicator on the controller before resetting it at the established set point.

When done, change all set points back to their original settings. It is extremely important to double check to ensure all original settings are reprogrammed back into the controller(s) and that no alarm indicators (temperature or ORP/pH) are in an alarm condition. It is also important to hit the 'reset' button to ensure the actuated valve(s) open again. Any questions whatsoever regarding this and or any other test discussed in this document should be brought to the attention of the Director of Maintenance.

3. Gas Detection System

To test a chlorine sensor, put a small amount of bleach in a plastic bottle with a spout similar to what is used to check for gas leaks (the aqua ammonia bottle) and put the spout a few inches under the sensor. Squeeze the bottle, being careful so as to expose the sensor to fumes only as opposed to liquid. When you hit the alarm shutdown set point, the alarms should sound and all actuated valves should close.

For the sulfur dioxide sensors, do the same but use *extremely* diluted sodium bisulfite.

4. Plant Emergency Stops (E-stops)

To test the facility's e-stops, simply press one of the e-stops and check to ensure that all actuated valves throughout the entire compressed gas system shut down with the exception of those in the vacuum alarm system.

5. Backflow Prevention System

When the railcar is close to being padded; i.e., achieves the pre-determined pad pressure, check to ensure that there is at least a 5 lb pressure differential between the pressure on the railcar and the compressor pressure.

Note: It's extremely important that both pressure gauges (railcar and compressor) are functioning properly. Adjustments to the pressure differential switches should not be made without first confirming that the pressure gauges are calibrated to read the same when hooked up to the same pressure source. This can only be done by removing both gauges

from the system and having them 'bench checked' by qualified maintenance personnel.

6. Auto-Dialer Alarm System

The auto-dialer alarm system can be checked at the same time any of the gas detection sensors are tested. The dialing sequence should begin when the gas detection system's warning parameter is reached.

7. Ultrasonic Tank Level Monitoring System

The only way to activate an alarm to ensure it is working is to actually raise the volume of each of the tanks to the high level set point, or to lower the volume of each of the tanks to the low set point. Each tank has its own unique cycle of reaching the high and low volume levels. Some tanks cycle daily (bleach storage for example) and will provide you with the opportunity to confirm these parameters on any given day. Some tanks (acid storage tanks for example) cycle over days and weeks such that confirmation of the high and low alarms will be limited to those times. You will be required to document the results of alarm activation (high and low) no more than once during the day the inspection is required if the tank is used; i.e., filled to the high alarm point or emptied to the low alarm point.

8. Automatic Scale Shutoff System

This also is best performed at the startup of the system each day and after conducting the daily scale check. Upon filling the first container for the day on each scale, confirm that the actuated valve closes at the pre-determined set point. This is accomplished by observing the position indicator on the actuator. Since the scale check is performed on every ton scale, so can be the mitigation system check. In the case of SO2, where there are some days where no SO2 is filled, it is not necessary to conduct this test. It is important to keep in mind that while chlorine and sulfur dioxide containers may be filled on the same scales, the actuated valves in the liquid line for each product operate independently of each other, therefore, the check must be conducted for each product being processed during any given day

D. Training and Communication

In addition to the obvious requirement for checking and maintaining each of the above discussed mitigation systems on a regularly scheduled basis as established herein, probably the most important requirement to keep in mind is the need for training and communication. Failure to follow procedures in accordance with manufacturer's guidelines may result in the inoperability of any

of these systems. Thorough initial training presented to all affected employees followed by annual refresher training will go a long way toward ensuring that the systems are properly serving the purpose for which they were intended. It is important to keep in mind that this training should not be provided only to selected employees at the Branch. This training must be presented to all Plant employees, must be provided by a qualified employee, and must be documented on the Record of Training for each employee. Again, the focus of the training should be on ensuring all employees understand the purpose and operation of each component of the mitigation system and the response to be taken in the event of activation (alarm or shutdown) of any of these components.

It is understood that completing each of these checks will take a fair amount of time however, as stated early in the introduction to this SOP, a system that is not capable of performing the functions for which it is designed is of no use to the Branch. The benefit of ensuring that each component of the mitigation system is operating properly should be easily recognized and it is the responsibility of each Branch to ensure that the procedures outlined in this document are followed to the extent intended.

Any questions and or comments regarding the information and procedures covered in this chapter should be directed to either JCI's Director of Maintenance or Executive Vice President of Operations & Security.

TORRANCE
CONFIRMATION OF OPERATION
PLANT MITIGATION SYSTEMS
(Inspection Checklist)

Branch:	TORRANCE						Week Of:			
System	Monday		Tuesday		Wednesday		Thursday		Friday	
Gas Probes	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
CL2-L1, CL2-L2										
CL2-L3, CL2-L4, CL2-L5										
SO2-R5, SO2-R6, SO2-L6										
CL2-R1, CL2-R2										
CL2-R3,CL2-R4,CL2-R5										
CL2-W1,CL2-W2, SO2-W1, SO2-W2										
Tank Level System	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
Tanks, 28, 29, 30										
Tanks, 31, 32, 33										
Tanks 34, 35, 36										
Tanks 25, 26, 6, 8										
Tanks 7, 9, 11A, 11B										
Tanks 20A, 20B										
Scale Shutdown	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
Scale Shutdown #1 - CL2 Tons	OOS		OOS		OOS		OOS		OOS	
Scale Shutdown #2 - CL2 Tons										
Scale Shutdown #3 - CL2 Tons										
Scale Shutdown #1 - CL2 150#										
Scale Shutdown #2 - CL2 150#										
Scale Shutdown #1 - SO2 Tons										
Scale Shutdown #1 - SO2 150#										
Air BFP System	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
Back Flow AIR System in Bleach Machine area										
Vacuum Alarm	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
Vacuum Alarm in Blow Down and Vacuum Ton Area										
Panic Buttons	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
Old Bulk CL2 Load Area PB6										
Bulk Bleach Tanker Load PB1										
Ton Fill Area PB2										
Make Vat Area PB4										
Cylinder Fill Area PB3										
Rail Car Spot 21 PB5										
Vat Control System	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
VAT Control System #1										
VAT Control System #2										
Railcar VCS	OK	Defective	OK	Defective	OK	Defective	OK	Defective	OK	Defec
SYSTEM #1 CL2										
SYSTEM #2 CL2										
SYSTEM #1 SO2										

THIS FORM IS TO BE FAXED OR E-MAILED AT THE BEGINNING OF THE WEEK FOLLOWING THE WEEK INSPECTED

AL=A. Luna, MP=M.Padilla, FM=Fernando M., [illegible]

6/20/08

TORRANCE

CONFIRMATION OF OPERATION
PLANT MITIGATION SYSTEMS
Authorization to Operate

01.22.09 SF XIX 15

CHECK THE APPROPRIATE BOX:

[redacted] We are making repairs to the components identified to be functioning improperly [see list above] and confirm that this product transfer system will not be used prior to the completion of these repairs.

[redacted] We are seeking authorization to operate the:
system while we make repairs to the component[s] identified above. We will operate the system in the following manner, through the period when authorization is no longer required. NOTE: *This authorization form must be submitted prior to producing on a DAILY basis during the authorzation period.*

Last night problems occurred on vat #2 probe (VC) giving erroneous reading (way high)
Spoke with Barry at +/- 9:00AM today, having Isaias run test as Barry suggested
To find if the problem on (VC) vat #2 is 873 controller or probes
Isaias is simply connecting the probes from vat # 1 to 873 controller of # 2 vat system
and find if the controller or probes are the problem of vat #2
We currently have VAT #2 on BY-PASS

IN BY-PASS MODE ON VAT #2 ALL MITIGATION SYSTEM WORKS
EXCEPT AUTO RAIL CAR SHUT DOWN & BLOW DOWN ACTUATOR VALVE
system while we make repairs to the component[s] identified above. We will operate the system in the following manner, through the period when authorization is no longer required. NOTE: *This authorization form must be submitted prior to producing on a DAILY basis during the authorization period.*

*NOTE: IN THE EVENT OF A DEFECTIVE GAS SENSOR, PLEASE DESCRIBE THE LOCATION OF THE NEXT CLOSEST SENSOR TO THE ONE(S) THAT IS/ARE NOT FUNCTIONING CORRECTLY. ALSO REPORT AS TO WHEN THE PART(S) WILL BE ARRIVING AND/OR THE REPAIR DATE.

Confirming name:	Isaias
Operators Name:	Luna, Fernando and Poly
	* Note: Each operator in the area that is to be tested this day must sign off upon completion.
Authorizing Name:	Tim Ross

Legend

GP	Gas Probe
T/L	Tank Level Monitoring System
ML	Millram Sensor System
SSD	Scale Shutdown
ABFP	Air Backflow Prevention System
VC	Vat Control
RVCS	Railcar Valve Closure System
PB	E-Stops

THIS FORM IS TO BE FAXED OR E-MAILED ANY DAY A COMPONENT OF THE MITIGATION SYSTEM IS DETERMINED NOT BE FUNCTIONING PROPERLY.

1/11/08

PRE-STARTUP SAFETY REVIEW
29 CFR 1910.119(i)

Branch: *Torrance, California*

Date: *01/17/2008*

Process or Equipment: ***The change in Chlorine and Sulfur Dioxide railcar unloading is that all five chlorine spots 20, 21, 22, 23, 24 and sulfur dioxide spot 25 will now utilize the Rail Car Valve Closure System (RCVCS) to further enhance Torrance's mitigation system. Any chlorine or sulfur dioxide RC that is connected to their respective process systems will automatically shut down in the event of an emergency; i.e., a gas release, a low air pad condition, a power failure or if an e-stop is depressed.***

Purpose of Equipment: ***To significantly reduce if not eliminate the possibility of the continued unloading of chlorine or sulfur dioxide from the railcar in the event of an emergency involving the entire compressed gas system. This equipment is also intended to improve the level of security at the Branch by reducing the vulnerability of the railcar.***

Description of Process or Equipment: ***The RCVCS is a pneumatic operated valve closure system. The RCVCS is comprised of pressurized -40 dew-point air that is fed into two separate 60 gallon air tanks (#1 tank-South System, #2 tank-North System), 1" actuated valves, actuators, air motors, pressure regulator, manual valves, piping, control box with identified switches for operation, emergency activation button, audio alarm, visual lights with green indicating the system is operational, a red strobe light indicating that the RCVCS has been activated, PSI gauges, an inline filter, piping and piping. All of these components combine to activate the shut down of all RCVCS valves on all rail cars actively servicing the sulfur dioxide or chlorine process systems.***

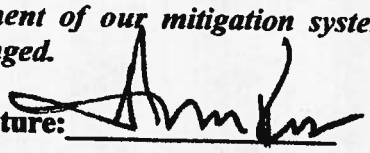
Prior to the introduction of highly hazardous chemicals to a process, the following must be confirmed:

1. Construction and equipment are in accordance with design specifications (DESCRIBE HEREIN). *As discussed above, all system piping and valves required to offload chlorine and sulfur dioxide railcars at spots 20, 21, 22, 23, 24 and 25 are installed and are in accordance with industry design specifications.*

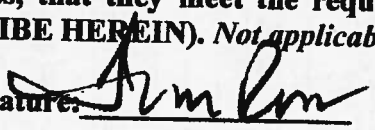
Authorizing Signature: _____

2. Safety, operating, maintenance, and emergency procedures are in place and are adequate (DESCRIBE HEREIN). *This railcar valve closure system in and of itself serves as an additional safeguard with respect to our compressed gas system; i.e., an*

additional component of our mitigation system. The process for unloading railcars alone has not changed.

Authorizing Signature: 

3. For new facilities, a process hazard analysis has been performed and recommendations have been resolved or implemented before startup; and for modified facilities, that they meet the requirements contained in Management of Change (DESCRIBE HEREIN). *Not applicable.*

Authorizing Signature: 

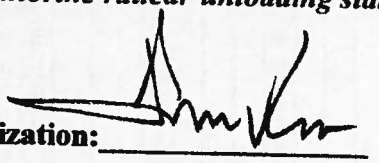
4. Training of each employee involved in operating a process has been completed (DESCRIBE BELOW). *The addition of five chlorine railcar unloading spots requires no additional and or unique training as the process followed and system used for unloading chlorine at these five spots is in fact identical to that followed at each of the other chlorine railcar unloading spots.*

Trainer:

Attendees:

During this Pre-Startup Safety Review, the following training topics were covered (DESCRIBE BRIEFLY): *The purpose and use of the railcar valve closure system to include the connection and operation of the RCVCS valves, the conditions under which the system could be activated, and the procedures required to operate, activate and reset the valves back into a ready status.*

Note: It is important to note that if a Management of Change is required in accordance with 29 CFR 1910.119(l), a Pre-Startup Safety Review must be conducted and documented. Per 29 CFR 1910.119(i), this Pre-Startup Safety Review was conducted because (DESCRIBE BRIEFLY): *This PSSR was conducted solely to familiarize all employees with the operation of the railcar valve closure system at the five additional chlorine railcar unloading stations.*

Startup Authorization: 

Date: 1-17-08

MANAGEMENT OF CHANGE
Chlorine and Sulfur Dioxide Rail Car Valve Closure System

Equip ID: *Rail Car Valve Closure System (RCVCS)*	**Installed:** *Mid/Late Jan. of 08'*	**Manufacturer:** *Powell Fabrication*

Type of Change: (Circle one)

Chemical *Process Technology* Facility Equipment Procedural

Description: *A mitigation system device that automatically closes the liquid and air valves on chlorine and sulfur dioxide railcars in the event of an 'emergency'; i.e., a gas release, a low air pad condition, a power failure or if an e-stop is depressed.*

Duration of Change: (Circle one) **Temporary** **Permanent** *X*

Technical Basis for the Change: *The purpose of this change is to provide the Branch with a mitigation system that will shut down any RC that is connected to CL2 or SO2 process systems in the event of an emergency as described above.*

Impact of the Change on Health and Safety: *As no changes will be required in the current individual chlorine and or sulfur dioxide railcar unloading procedures, there is no anticipated impact on personal health and safety.*

Authorization to Proceed with Change: *Tim Ross - Branch Manager - 3 January 08'*

Modifications to Existing Operating or Maintenance Procedures?: *No changes will be required in the current chlorine and or sulfur dioxide railcar unloading processes.*

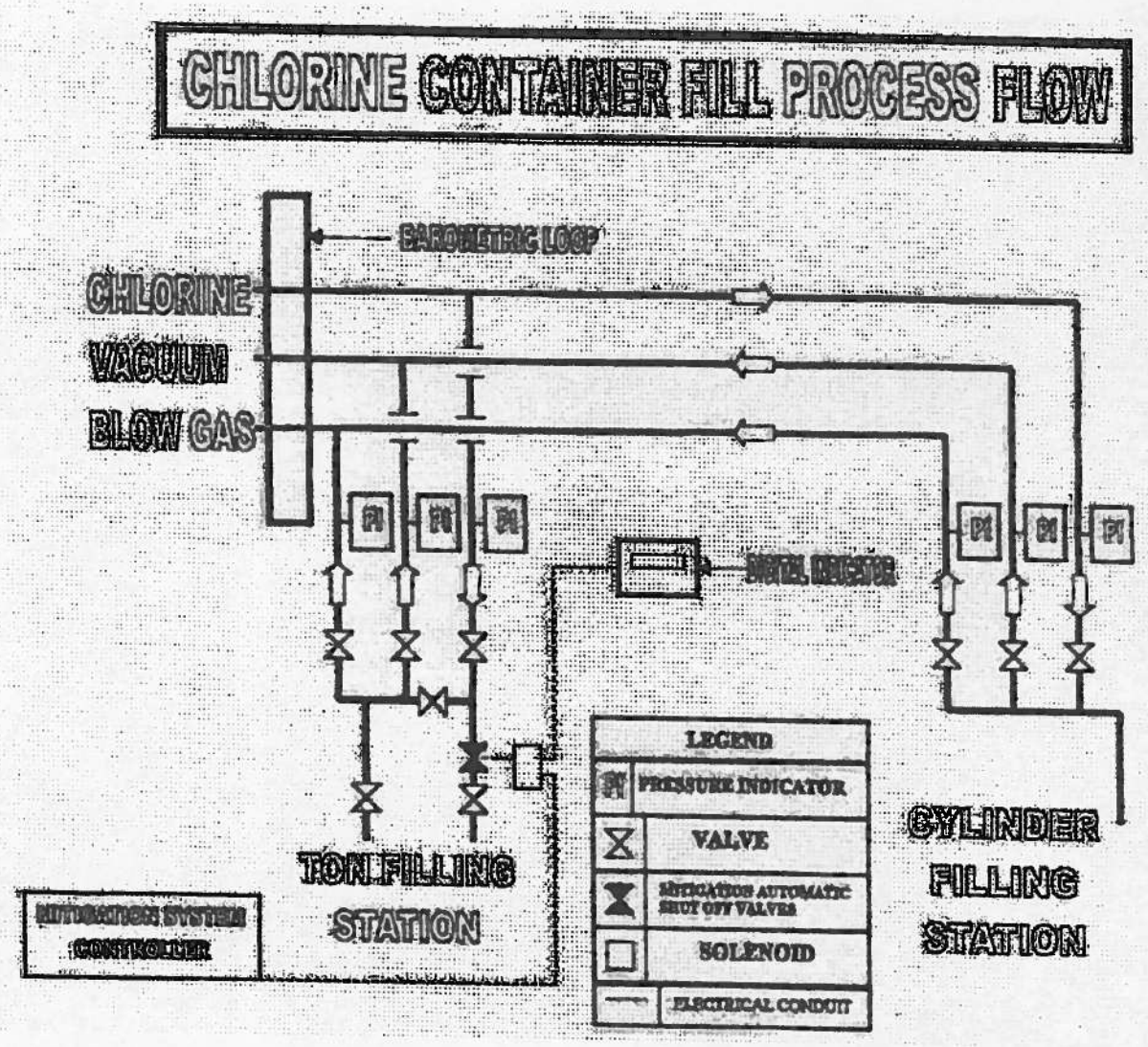
Is the PHA affected by this change and if so, has a hazard assessment update been performed?:
Not applicable as this does not meet any of the parameters under which a PHA is required.

Is Process Safety Information affected and if so, has a Pre-Startup Safety Review been performed?: *Process safety information is impacted by this change only because of the significant increase in maximum intended inventory. A Pre-Startup Safety Review has been performed.*

Necessary Time Period for the Change: *This change has been implemented.*

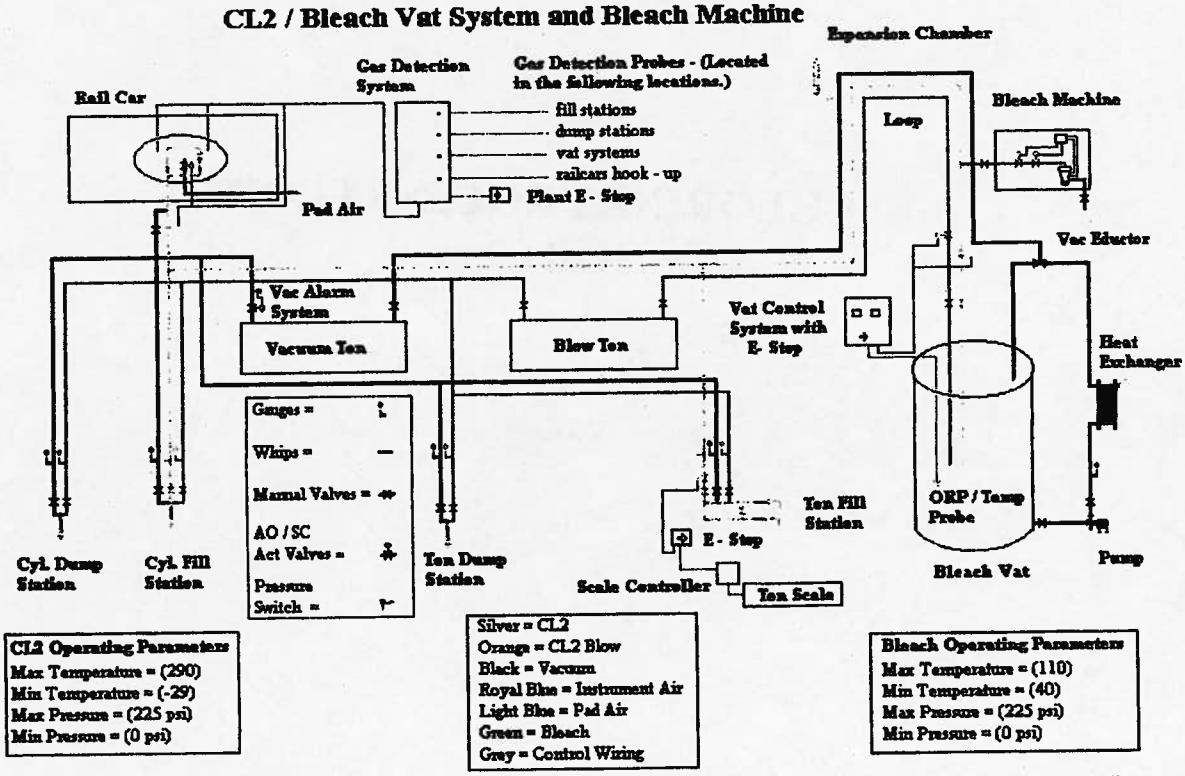
Authorization for Startup:

CHLORINE CONTAINER/CYLINDER PROCESS FLOW


CHLORINE CONTAINER FILL PROCESS FLOW
BAROMETRIC LOOP
CHLORINE
VACUUM
BLOW GAS
PI
SCALE INDICATOR
LEGEND
PRESSURE INDICATOR
VALVE
SOLENOID
ELECTRICAL CONDUIT
CONTROLLER
TON FILLING
STATION
CYLINDER
FILLING
STATION

CHLORINE PROCESS FLOW
Rail Cars

CL2 / Bleach Vat System and Bleach Machine

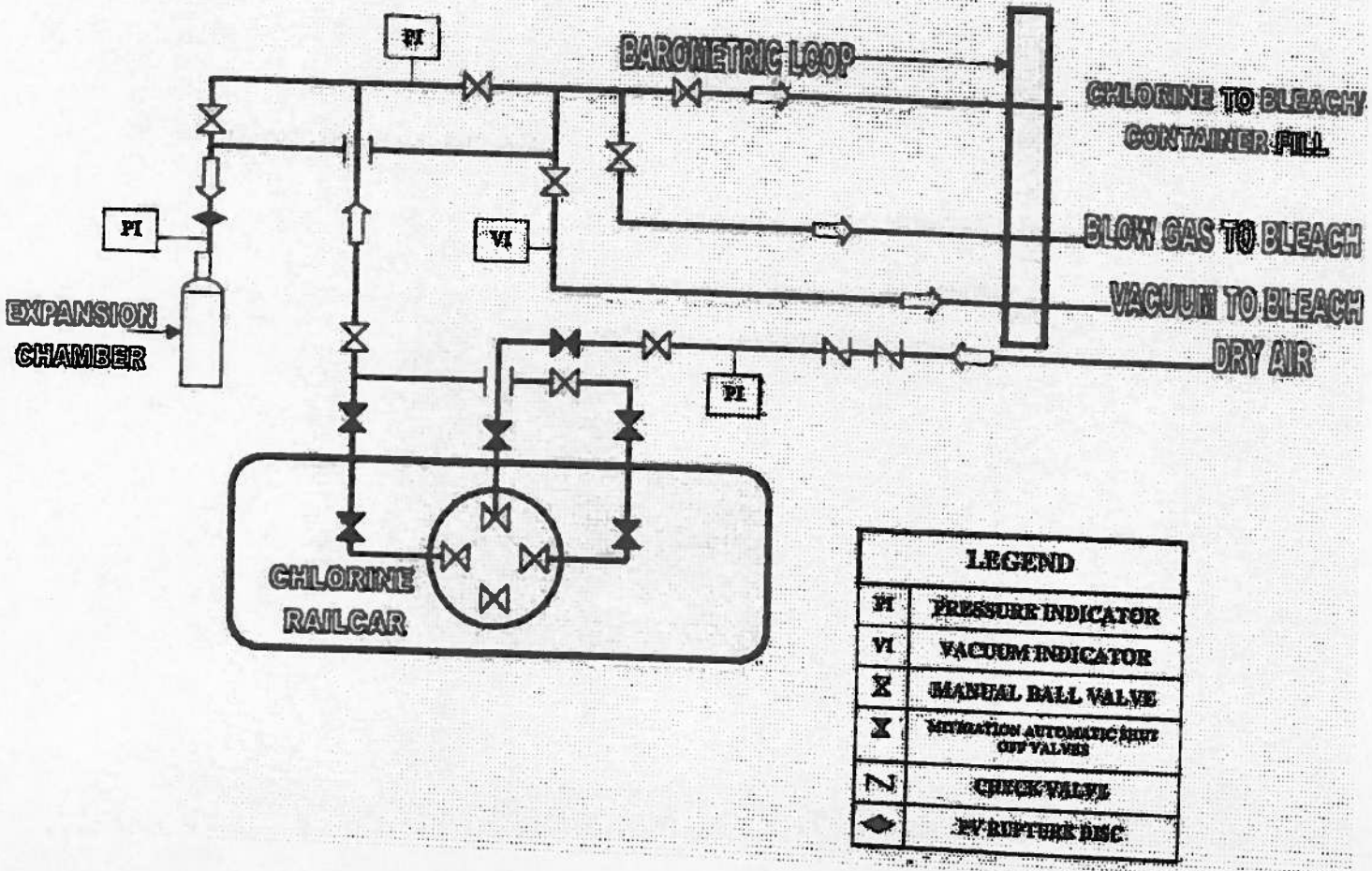


Note: For specific information regarding Scale Shutdown System , Vacuum Alarm System, Vat Control System and Gas Detection System; See additional drawings.

Process Chemistry = CL2 +2NAOH ..NAOCL + NACL + H20 + Heat

12/28/01

CHLORINE RAILCAR PROCESS FLOW



Unified Program (UP) Form
CONSOLIDATED CONTINGENCY PLAN

SITE MAP

A site plan and storage map must be included with your Contingency Plan. For relatively small facilities, these documents may be combined into one drawing. Since these drawings are intended for use in emergency response situations, larger facilities *(generally those with complex and/or multiple buildings)* should provide an overall site plan and a separate storage map for each building/storage area. A blank Facility Site Map has been provided on the reverse side of this page. You may complete that page or attach any other drawing(s) which contain(s) the information required below.

1. **Site Plan:** This drawing shall contain, <u>at a minimum</u>, the following information:

   a. Site Orientation (north, south, etc.);
   b. Approximate scale *(e.g. "1 inch = 10 feet".)*;
   c. Date the map was drawn;
   d. Locations of all buildings and other structures;
   e. Parking lots and internal roads;
   f. Hazardous materials loading/unloading areas;
   g. Outside hazardous materials storage or use areas;
   h. Storm drain and sanitary sewer drain inlets;
   i. Wells for monitoring of underground tank systems;
   j. Primary and alternate evacuation routes, emergency exits, and primary and alternate staging areas;
   k. Adjacent property use;
   l. Locations and names of adjacent streets and alleys;
   m. Access and egress points and roads.

2. **Storage Map(s):** The map(s) shall contain, <u>at a minimum</u>, the following information:

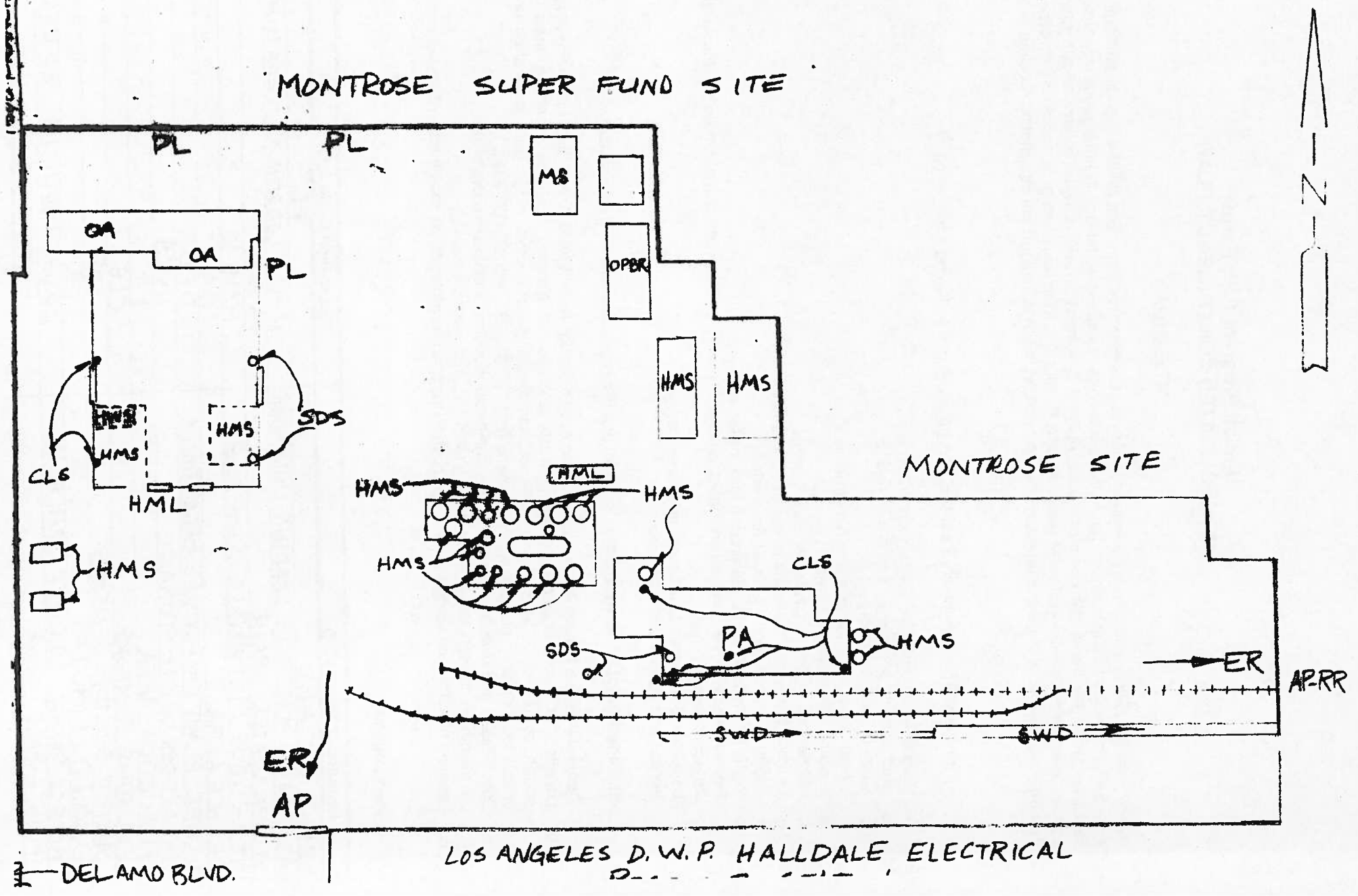
   a. General purpose of each section/area within each building *(e.g. "Office Area", "Manufacturing Area", etc.)*;
   b. Location of each hazardous material/waste storage, dispensing, use, or handling area *(e.g. individual underground tanks, aboveground tanks, storage rooms, paint booths, etc.)*. Each area shall be identified by a unique location code number, letter, or name *(e.g. "1", "2", "3"; "A", "B", "C", etc.)*;
   c. Entrances to and exits from each building and hazardous material/waste room/area;
   d. Location of each utility emergency shut-off point *(i.e. gas, water, electric.)*;
   e. Location of each monitoring system control panel *(e.g. underground tank monitoring, toxic gas monitoring, etc.)*.

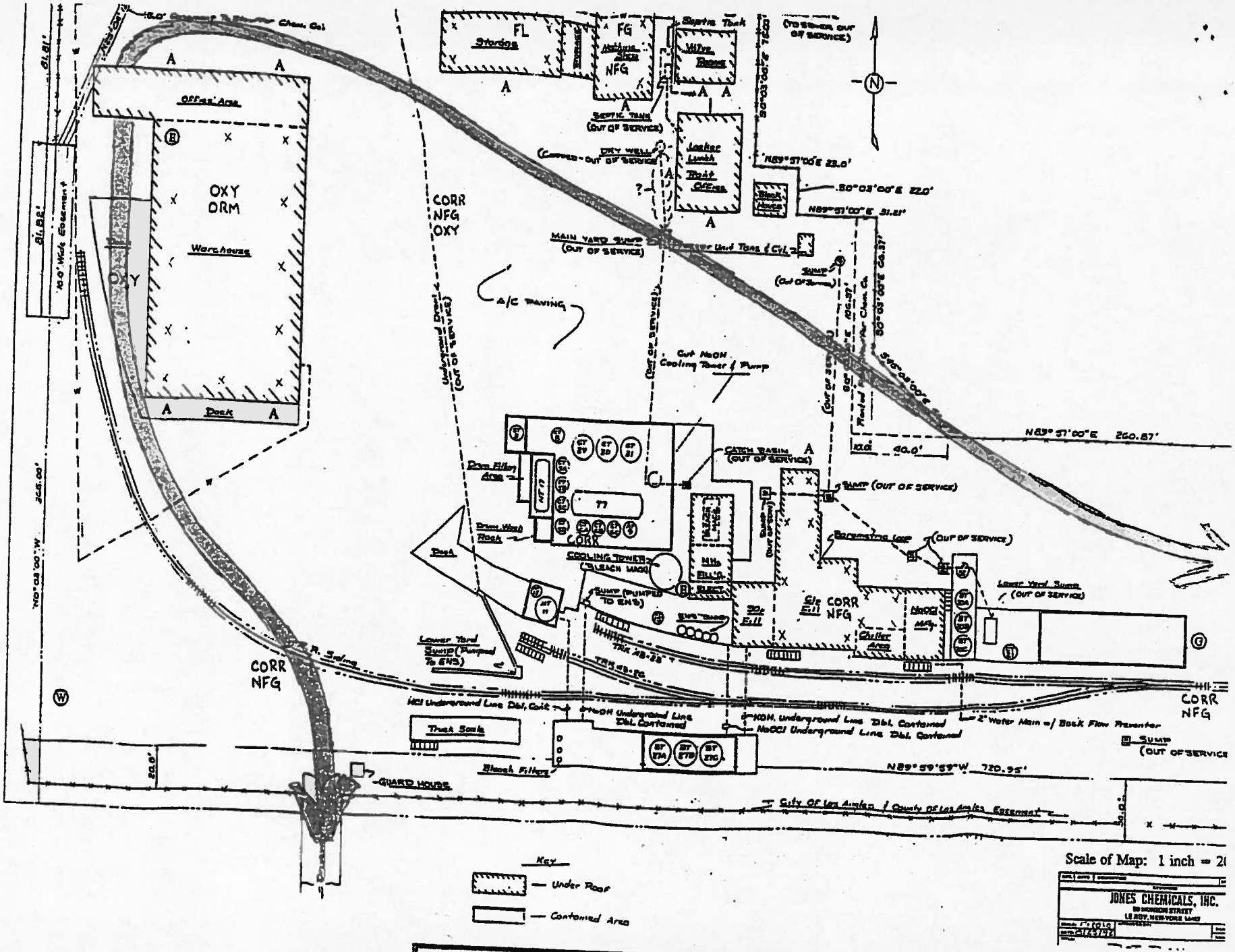
3. **Map Legend**

Item and/or Description	Location Code (LC)
PARKING LOT AUTO	PL
HAZARDOUS MATERIALS LOADING-UNLOADING	HML = LOADING / UNLOADING
STORM WATER DRAIN	SWD
HAZARDOUS MATERIALS STORAGE	HMS
OFFICE AREA	OA
DRIVER PLANT EMPLOYEE BREAK ROOM	DPBR
HAZARDOUS WASTE STORAGE	HWS
PRODUCTION AREA	PA
CHLORINE SENSORS	CLS
SULFUR DIOXIDE SENSORS	SDS
EVACUATION ROUTES	ER
ACCESS POINTS - VEHICLE RAILROAD	AP-VEC = VEHICLE AP-RR = RAILROAD
MAINTENANCE SHOP	MS

JCI JONES CHEMICALS INC.
1401 WEST DELAMO BLVD.
TORRANCE, CA 90501
7-24-07

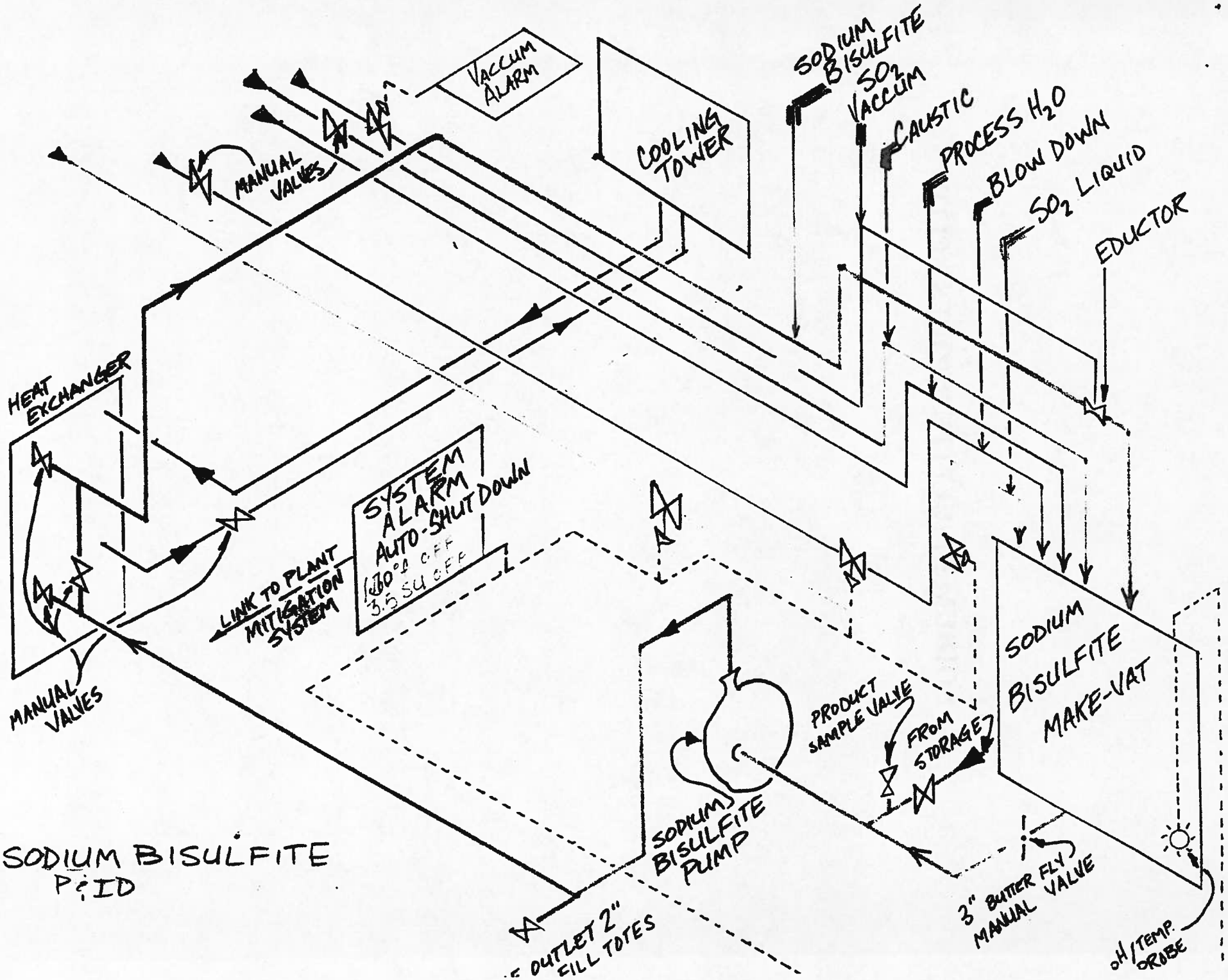
1" = 72 FEET





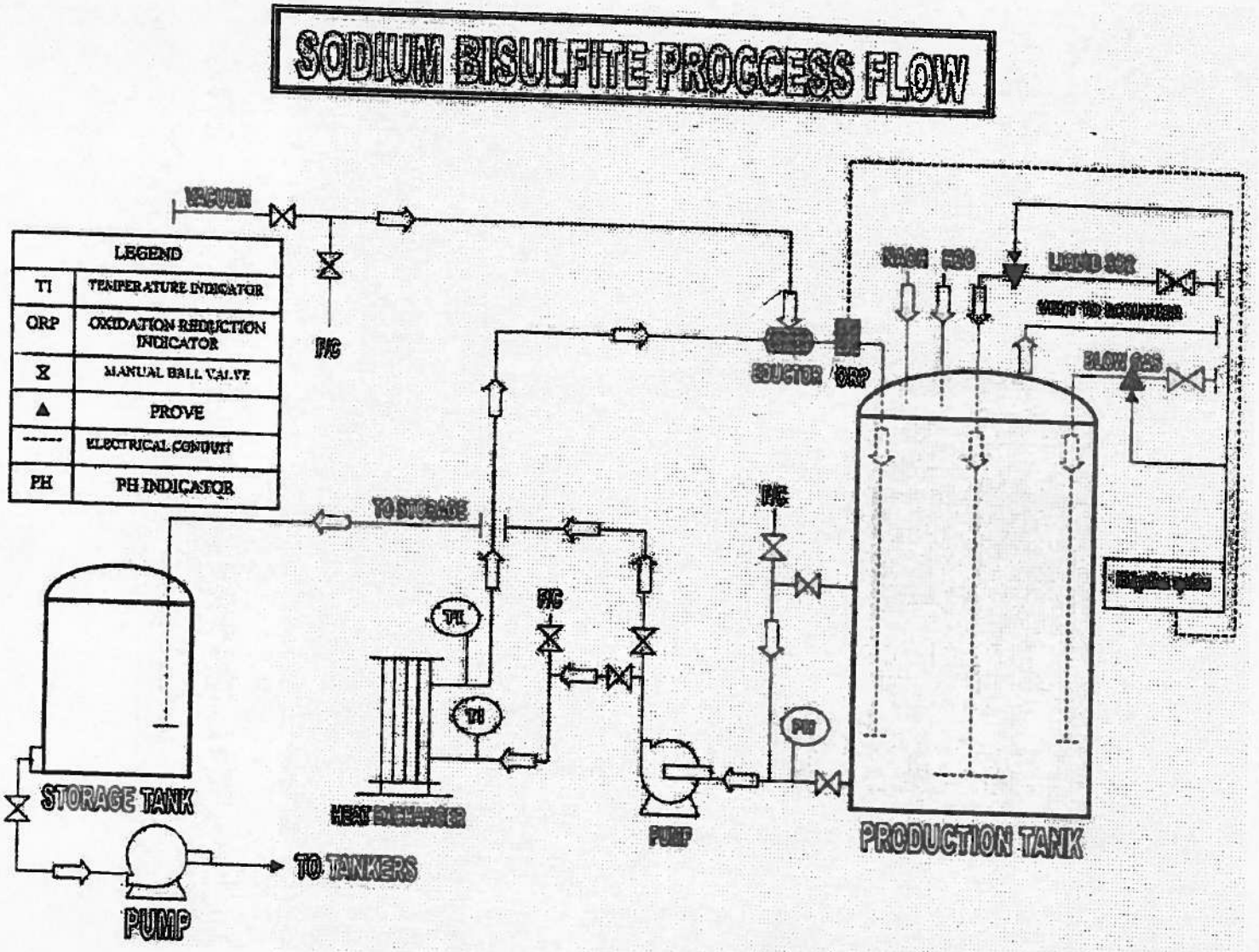
JCI Jones Chemicals Inc.
Torrance Branch

SODIUM BISULFITE PROCESS FLOW



SODIUM BISULFITE
P&ID

SODIUM BISULFITE PROCCESS FLOW



PROCESS SAFETY INFORMATION

COMPLIANCE AUDIT

Maximum Intended Inventory

For the purpose of RMP requirements, the 'maximum intended inventory' of chlorine and sulfur dioxide maintained on site at the JCI Jones Chemicals Inc. facility located at 1401 West Del Blvd. Torrance, CA. is 90 tons (one full railcar) of each. This represents the single largest storage capacity on site of each product.

May 1, 2009

From: Lucas.Robert@epamail.epa.gov
Sent: Friday, August 14, 2009 3:17 PM
To: Wenning, Nancy
Subject: Fw: Guidance on Maximum Intended Inventory

FYI

----- Forwarded by Robert Lucas/R9/USEPA/US on 08/14/2009 03:14 PM -----

From:	"Tim Ross" <tross@jcichem.com>
To:	Robert Lucas/R9/USEPA/US@EPA
Cc:	"'Dan Casmey" <dcasmey@jcichem.com>
Date:	06/24/2009 10:38 AM
Subject:	RE: Guidance on Maximum Intended Inventory

Robert,
Your quick response on clarifying the definition of "Maximum Intended Inventory" is sincerely appreciated.
I will make the needed corrections within Torrance RMP/PSM.

THANKS,

T.ROSS

From: Lucas.Robert@epamail.epa.gov [mailto:Lucas.Robert@epamail.epa.gov]
Sent: Wednesday, June 24, 2009 9:59 AM
To: Dan Casmey; Tim Ross
Cc: Wesling.Mary@epamail.epa.gov; Wenning, Nancy; Harrington.Dwayne@epamail.epa.gov; Witul.Janice@epamail.epa.gov; Addison.Ed@epamail.epa.gov; DIANE.C.BODINE@saic.com
Subject: Guidance on Maximum Intended Inventory
Importance: High

Dan and Tim,

Thanks for bringing this issue to my attention and here is the guidance concerning your attached information, which will need to be corrected.

The following guidance on Maximum Intended Inventory was received from Jim Belke at EPA Headquarters.

The term "maximum intended inventory" appears in the process safety information (68.65) and safety information (68.48) sections of the regulation. It doesn't appear in any other section of the rule, including the worst-case scenario sections.

http://www.epa.gov/emergencies/content/rmp/rmp_guidance.htm#General

In the RMP General Guidance (Chapter 6), here is what we say about the term:

Maximum Inventory. You must document the maximum intended inventory of any vessel in which you store or process a regulated substance above its threshold quantity. If you are not sure of the capacity of the vessel, you can obtain this information from the manufacturer of the vessel. In some cases, this information will be attached to the vessel itself.

You may want to check with any trade association or standards group that develops standards for your industry to determine if there are any limitations on inventories. For example, in some cases the maximum capacity of a tank may be 10,000 gallons, but an industry standard may recommend that the tank never be filled to more than 85 percent capacity. If you follow the standard, your maximum inventory would be 8,500 gallons.

In reviewing this guidance, there is no mention of single largest storage capacity or single largest vessel to represent the Maximum Intended Inventory. The guidance refers to ***any*** *vessel in which you store or process a regulated substance above its threshold quantity. To further clarify this issue, the inventory of each vessel storing or processing an RMP regulated substance above threshold quantity must be documented.*

Robert Lucas
EPCRA and RMP Inspector
US EPA Region 9 (SFD-9-3)
75 Hawthorne Street
San Francisco, CA 94105
Telephone: 415-972-3069

APPENDIX A – DOCUMENTATION OF ACTIONS TAKEN

Recommendation	Action to be Taken	Date to be Completed	Responsible Person	Date Completed / Initial	Communicated to staff?
1. Investigate Community Alert Network	Not completed. Assign complete by date and responsible person.	JULY 2006	TONY MARTINES	[signature]	JULY 2006
2. Consider Installation of Leak Detectors in Container Storage Area	Completed (complete this row)	JUNE 30, 2006	TIM ROSS	JUNE 30, 2006	JUNE 30, 2006
3. Verify Manual Shutdown Procedures	Completed (complete this row)	COMPLETED	TONY MARTINEZ		
4. Install Automated Seismic Mitigation System	Completed (complete this row)	COMPLETED	MARCH 2002	MARCH 4, 2002 R.	MARCH 4, 2002
5. Review procedures to prevent 150# cylinders from being overfilled.	Not completed. Assign complete by date and responsible person.	IN PROGRESS JAN 19th 07	TIM ROSS JOSE	OCTOBER 17, 2007 R.	OCTOBER 17, 2007 R.

Recommendation	Action to be Taken	Date to be Completed	Responsible Person	Date Completed / Initial	Communicated to staff?
6. Consider a rigid cage to stabilize unsupported cylinders	Not completed. Assign complete by date and responsible person.	Feb. 2 '07	Tim Ross	Feb 2'07 R.	Yes

I. DESIGN CODES, ENGINEERING STANDARDS, AND PRACTICES

A. Introduction. The purpose of this section is to provide a 'stand-alone' document summarizing the design codes, engineering standards, and practices applicable to the compressed gas (chlorine and sulfur dioxide) systems, equipment and processes in service at JCI Jones Chemicals, Inc. (JCI) and the methods by which JCI complies with them. To the extent possible, this includes the entire compressed gas system; i.e., from the railcar to the filling stations and or the bleach and sodium bisulfite production systems.

Realizing that the range of components comprising the compressed gas systems, equipment and processes in service at JCI is extremely broad; i.e., piping, valves, flanges, gauges, fittings, and etc., an effort has been made to simplify the following presentation such that all 'like systems and equipment' are discussed as one wherever possible and appropriate.

B. References. The following publications are considered to be acceptable sources of information with respect to chlorine and sulfur dioxide repackaging compatible equipment and systems and were referenced in the development of this document:

1. JCI Jones Chemicals, Inc.'s Engineering I Manual.
2. Chlorine Institute Pamphlet 1 (The Chlorine Manual)
3. Chlorine Institute Pamphlet 6 (Piping Systems for Dry Chlorine).
4. Chlorine Institute Pamphlet 17 (Packaging Plant Safety and Operational Guidelines).
5. Chlorine Institute Pamphlet 60 (Chlorine Pipelines).
6. Chlorine Institute Pamphlet 95 (Gaskets for Chlorine Service).
7. Chlorine Institute Pamphlet 96 (Sodium Hypochlorite Manual).
8. CGA G-3 – Sulfur Dioxide
9. Sulfur Dioxide – Material Handling and Physical Properties Handbook
10. ASTM Standards (2001) – Volume 01.01: Steel – Piping, Tubing, Fittings

C. Definitions. It should be understood that Federal regulations dictate the standards applicable to the design, construction and operation of the chlorine and sulfur dioxide repackaging and transfer systems in service at JCI today. In an effort to clarify the applicable standards and codes, the following definitions apply, unless otherwise noted:

1. ASME: American Society of Mechanical Engineers
2. ASTM: American Society for Testing and Materials
3. ANSI: American National Standards Institute, Inc.
4. NACE: National Association of Corrosion Engineers (NACE Int'l)
5. Chlorine: DRY chlorine, either gas or liquid

6. Sulfur dioxide: DRY sulfur dioxide, either gas or liquid
7. Dry air: Clean, dry, oil-free, compressed air, dried to a dew point measured at atmospheric pressure of -40°F (-40°C) or below.
8. NPS: Nominal pipe size
9. OD: Outside diameter
10. Sch: Schedule

D. Covered Process Systems and Equipment. Following is a discussion of the major components from which our 'covered processes'; i.e., compressed gas systems, are comprised and the design codes and standards applicable to each of them.

1. Piping Systems. The compressed gas piping systems in service at all JCI facilities are used to transport dry liquid chlorine and sulfur dioxide. Chlorine piping systems are comprised of schedule 80, seamless ASTM A106 Grade A carbon steel in accordance with ASME B36.10 regardless of whether it is threaded or welded construction while sulfur dioxide piping systems are schedule 80, seamless ASTM A106 Grade B carbon steel. An exception to this is the threaded and flanged Kynar lined blow piping which is on the vat side of the barometric loop and before it transitions into kynar piping in the sparge tube. Note: JCI Jones Chemicals, Inc. – Torrance does not use any welded piping in chlorine and or sulfur dioxide service. A minimum of ASTM A106 Grade B Sch 80 is required for chlorine and sulfur dioxide piping systems, thus, systems in service at all JCI facilities either exceed or meet these standards. JCI's Engineering I Manual and the Chlorine Institute's Pamphlets 6 and 60 were used in determining the compatibility of this piping in our chlorine system while JCI's Engineering I Manual and the Sulfur Dioxide – Material Handling and Physical Properties Handbook were used in determining the compatibility of this piping in our sulfur dioxide systems.

2. Gaskets. The gasket material used throughout the chlorine piping system in Torrance is either Garlock Gylon 3510, a Barium sulfate filled PTFE (Teflon) material or Gore-Tex GR, expanded PTFE (Teflon) material. Both are materials recommended for use in accordance with Chlorine Institute Pamphlet 95 (Gaskets for Chlorine Service).

3. Fittings. The fittings used in the compressed gas piping systems at all JCI facilities can be either threaded or socket welded and are ASTM A105, class 2000/3000 forged steel in accordance with ASME B16.11. All fittings used in the chlorine and or sulfur dioxide piping systems at JCI Jones Chemicals, Inc. – Torrance are threaded (screwed) fittings. JCI's Engineering I Manual and the Chlorine Institute's Pamphlets 6

and 60 were used in determining the compatibility of these fittings in our sulfur dioxide and chlorine systems respectively.

4. Flanges. As with fittings, flanges in our piping systems are ASTM A105, class 300 forged steel in accordance with ASME B16.5. JCI's Engineering I Manual and the Chlorine Institute's Pamphlets 6 and 60 were used in determining the compatibility of these flanges in our chlorine and sulfur dioxide systems respectively.

5. Valves. Valves used in chlorine and sulfur dioxide systems differ, not only with respect to those in chlorine vs sulfur dioxide systems but between those used in liquid vs blow and or vacuum service. The valves typically found throughout the compressed gas systems at JCI Jones Chemicals, Inc. are 'ball' type valves, however, kynar diaphragm valves are used in isolated applications.

    a. Chlorine System Valves

        i. Liquid service – These are threaded cast steel per ASTM 216 WCB with monel ball and stem, and reinforced Teflon seat and packing. Valves may be configured with a Hastelloy ball and stem, an acceptable alternative in service at some JCI Branches. In addition to being used in chlorine system liquid lines, these valves are also used on the 'production' side of the blow and vacuum tons.

        ii. Blow service – These are kynar bodied, diaphragm valves with Teflon diaphragms and are found on the vat side of the barometric loop.

        iii. Vacuum service – Given that these valves are not expected to be exposed to liquid chlorine, these valves are made of PVC and are found on the vat side of the vacuum ton.

    b. Sulfur Dioxide System Valves

        i. Liquid and blow service - These are threaded 2000 psig WOG, type II, stainless steel Apollo ball valves with reinforced Teflon seats and packing and meet NACE MR-01-75 standards.

        ii. Vacuum service – As with those in chlorine service, these valves are made of PVC and are found on the vat siet of the vacuum ton. Note: not all Branches have a barometric loop in the sulfur dioxide piping system.

6. Chlorine/Sulfur Dioxide Ton Containers. As discussed in Chapter III of Engineering I Manual, chlorine and sulfur dioxide ton containers are DOT specification 106A500X containers fabricated of ASTM A-285-grade A carbon steel and are hydrostatically tested every five calendar years.

7. Chlorine/Sulfur Dioxide Cylinders. These containers are fabricated to DOT specification 3A480 or 3AA480 with ASTM A-285-grade A carbon steel and are hydrostatically tested every five years to the month at 800 psi.

8. Pressure and Vacuum Gauges. In accordance with JCI's Engineering 1 Manual, pressure and vacuum gauges are to be tantalum diaphragm, carbon steel body, with fluorolube filling and scales typically ranging from 0-300 psig (liquid), -30-60 psig (vacuum) and 0-200 psig (blow).

9. Ton and Cylinder filling station lines. Hoses used for filling tons and or cylinders are manufactured and tested in accordance with Chlorine Institute specifications and are comprised of a double Teflon inner core, a kynar braid cover, and schedule 80 monel fittings. Maximum operating burst pressure is 500 psig for a ½" ID hose. **Note**: In accordance with Chlorine Institute recommendations (CI Pamphlet 6), JCI's policy is that transfer hoses will not be kept in service for more than 24 months.

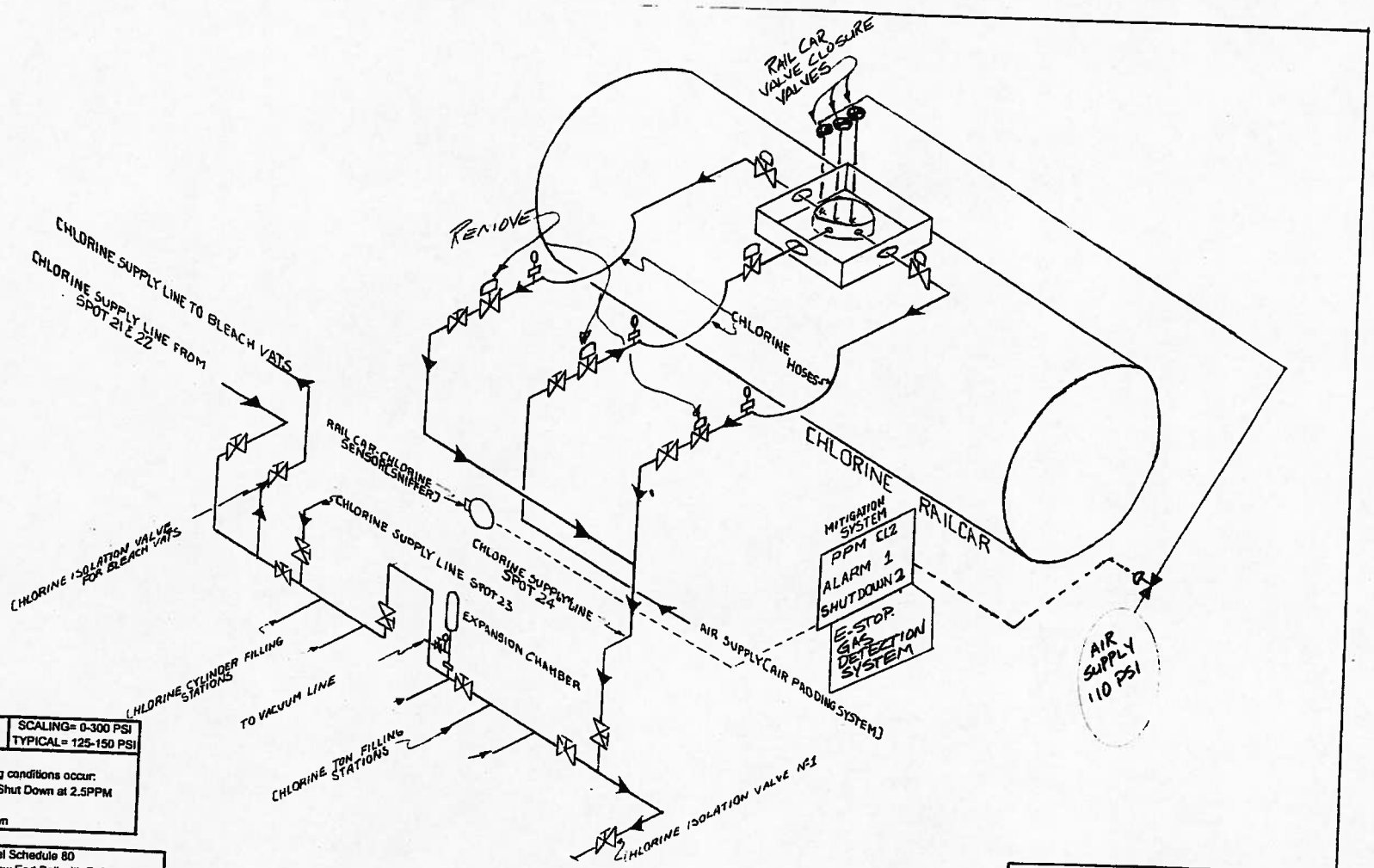
10. Railcar Transfer Hoses. Railcar transfer hoses (1" x 72") are manufactured and tested in accordance with Chlorine Institute specifications and are comprised of a Monel 400 inner core, external braid rings of 304 stainless steel, and a stainless steel casing. Minimum design pressure and maximum working pressure is 375 psig. The weld attaching the hose, braid and fittings is performed in accordance with ASME Section IX. **Note**: In accordance with Chlorine Institute recommendations (CI Pamphlet 6), JCI's policy is that transfer hoses will not be kept in service for more than 24 months.

11. Expansion Chambers. In accordance with JCI's Engineering I Manual and Chlorine Institute Pamplets 6 and 60, expansion chambers are installed in any liquid chlorine and sulfur dioxide pipelines more than 100' long to provide expansion room for the liquid in the event of excessive pressure buildup in the lines and have the capacity equal to 20% of the section volume. 100'of 1" piping contains approximately 45.76 lbs of liquid chlorine while 100' of 1 ½" piping contains approximately 112.44 lbs of chlorine. Given this, it can be seen that an expansion chamber comprised of an inverted 150 lb cylinder will provide adequate expansion capacity for 100' of either 1" or 1 ½" liquid lines. Expansion chambers are equipped with a rupture disc

designed to rupture at approximately 400 psig, thereby preventing rupture of the pipeline.

12. Ventilation System. JCI Jones Chemicals, Inc. follows the recommendation of the Chlorine Institute's Pamphlet 17 (Packaging Plant Safety and Operational Guidelines) which states: "The building ventilation system should provide fresh air for normal operation and should be designed to handle a situation in which a chlorine leak occurs. Natural ventilation may be adequate; otherwise, mechanical ventilation systems should be provided." Given the physical makeup of the buildings in which chlorine and or sulfur dioxide are repackaged at all Branches, to include overhead doors, the natural ventilation that exists is considered to be adequate. Note: The exception to this is the Torrance Branch as chlorine and sulfur dioxide are repackaged outside at this facility.

E. Summary. It is believed that in complying with the design codes, engineering standards, and practices referenced above and based on the work experience, policies and procedures developed since 1930 when JCI Jones Chemicals, Inc. first began operations, JCI's process equipment complies with recognized and generally accepted good engineering practices.



OPERATING SET POINTS

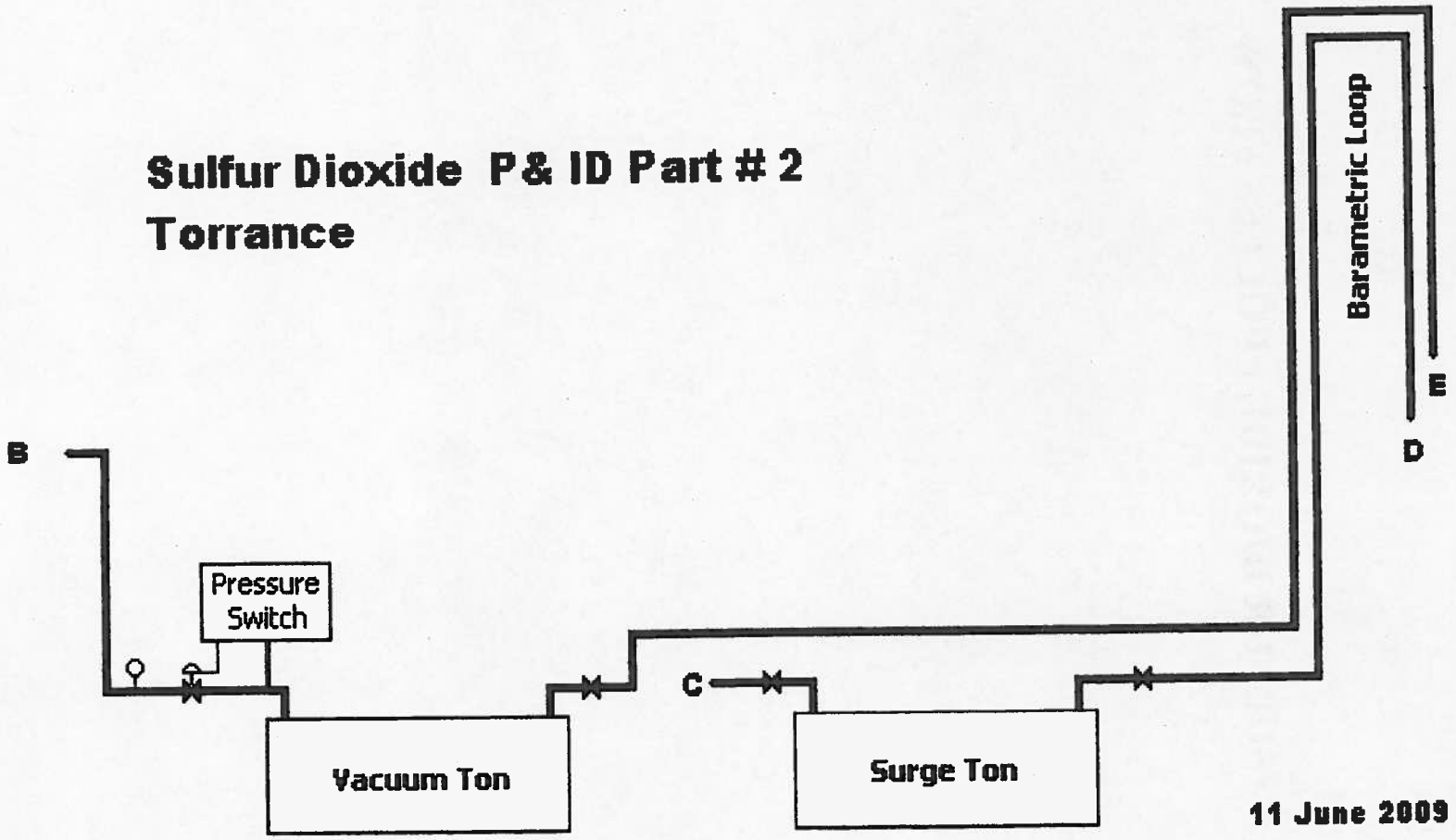
CHLORINE PRESSURE	SCALING= 0-300 PSI TYPICAL= 125-150 PSI
ACTUATORS VALVES Will shut off automatically if following conditions occur: CL2 Railcar Sensors are activated: Shut Down at 2.5PPM Less than 90# in Railcar Manual or Automatic Plant Shut Down	

Chlorine Line- 11/2" - 1" Carbon Steel Schedule 80 11/2" - 1 Carbon Steel Screw End Ball with Teflon seat
Actuators: Jamesbury Pneumatic Piston Actuators Rack and Pinion Actuators
Cl2 Hose- 1" Monel Chlorine Hose(3 per railcar)

JCI INC.	
TORRANCE	CALIFORNIA
BLEACH PLANT P & ID	
2/12/2002	BY OSWALDO ARANDA

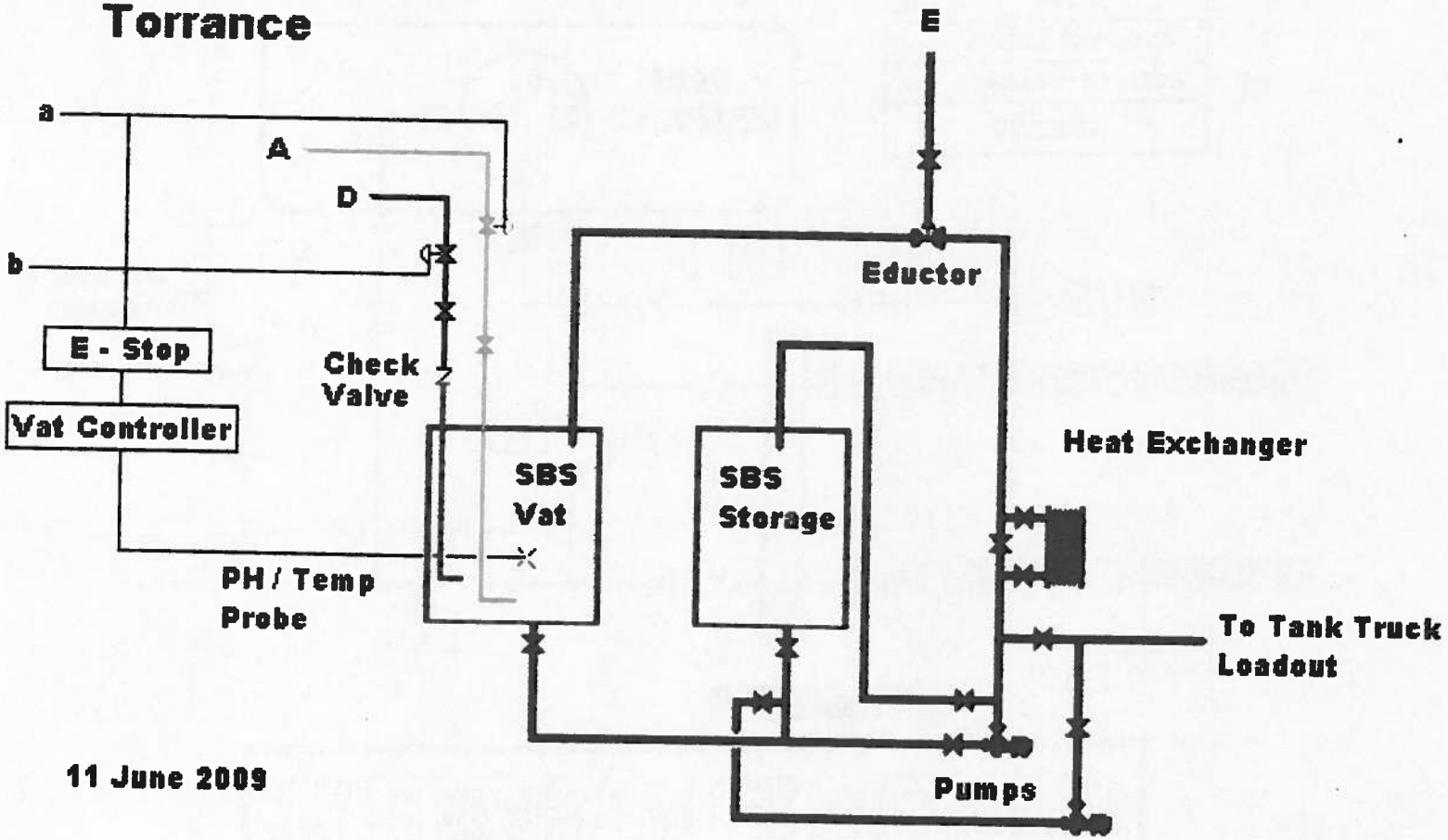
SULFUR DIOXIDE PROCESS FLOW

Sulfur Dioxide P& ID Part # 2
Torrance



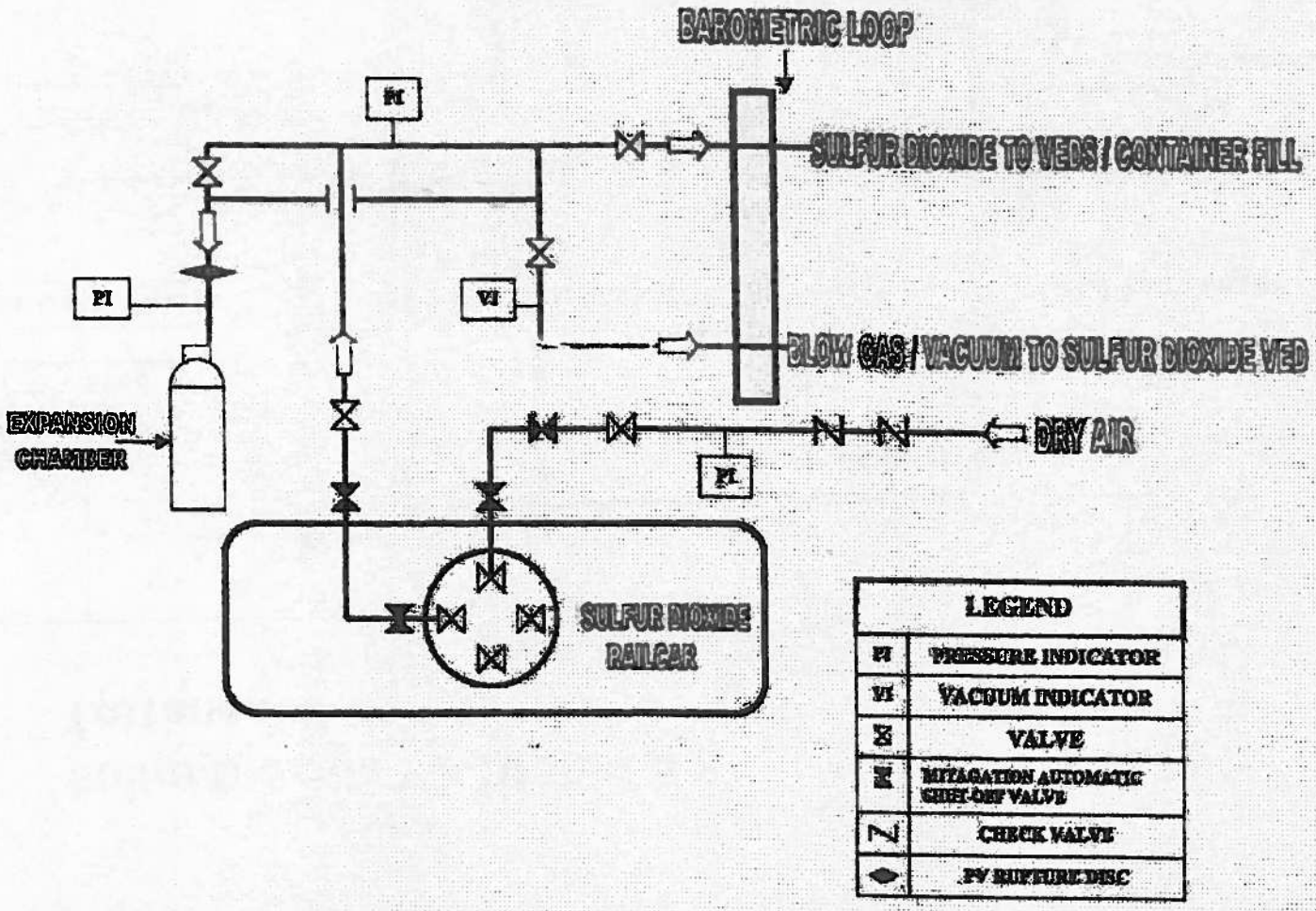
11 June 2009

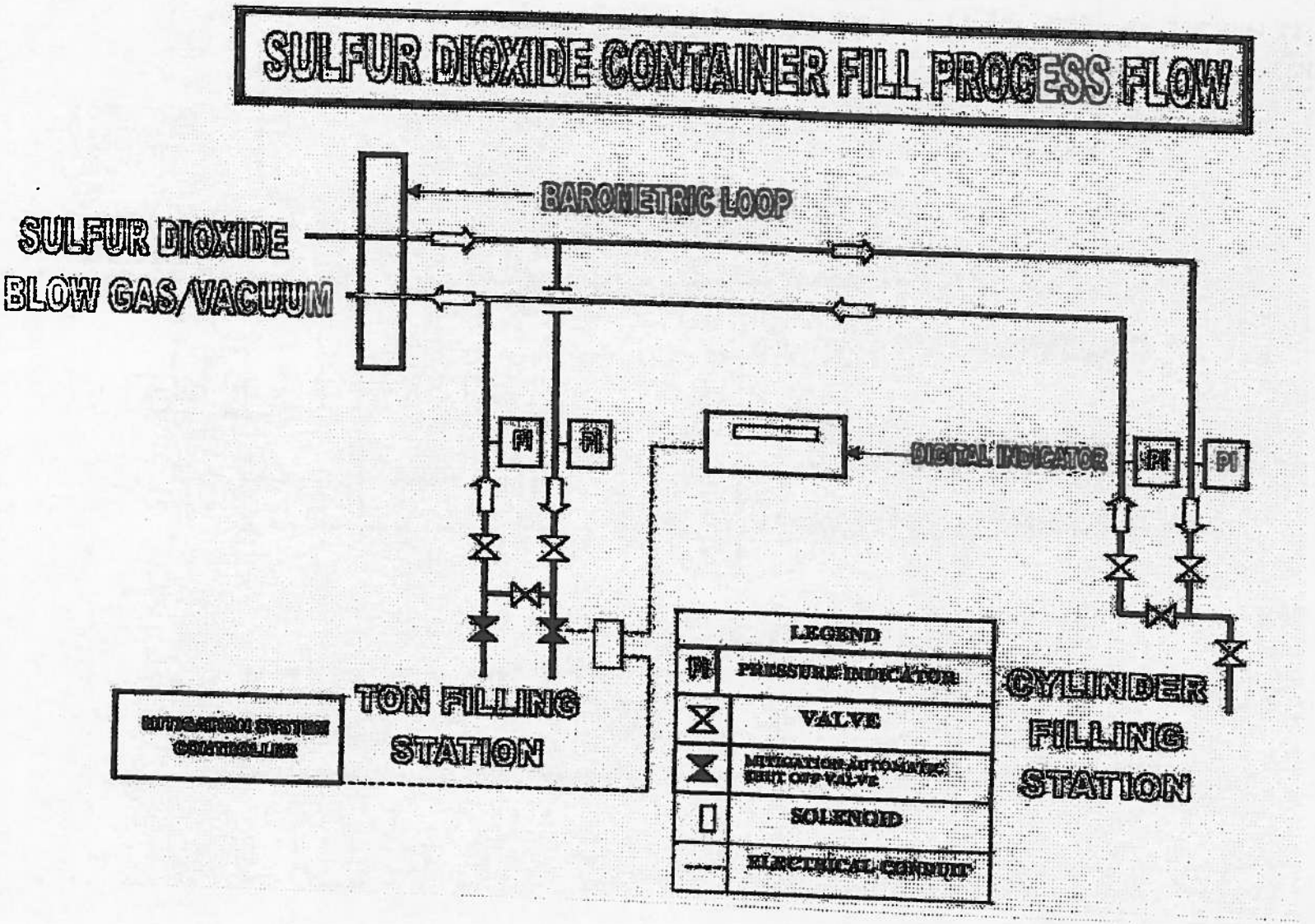
Sulfur Dioxide P& ID Part # 3
Torrance



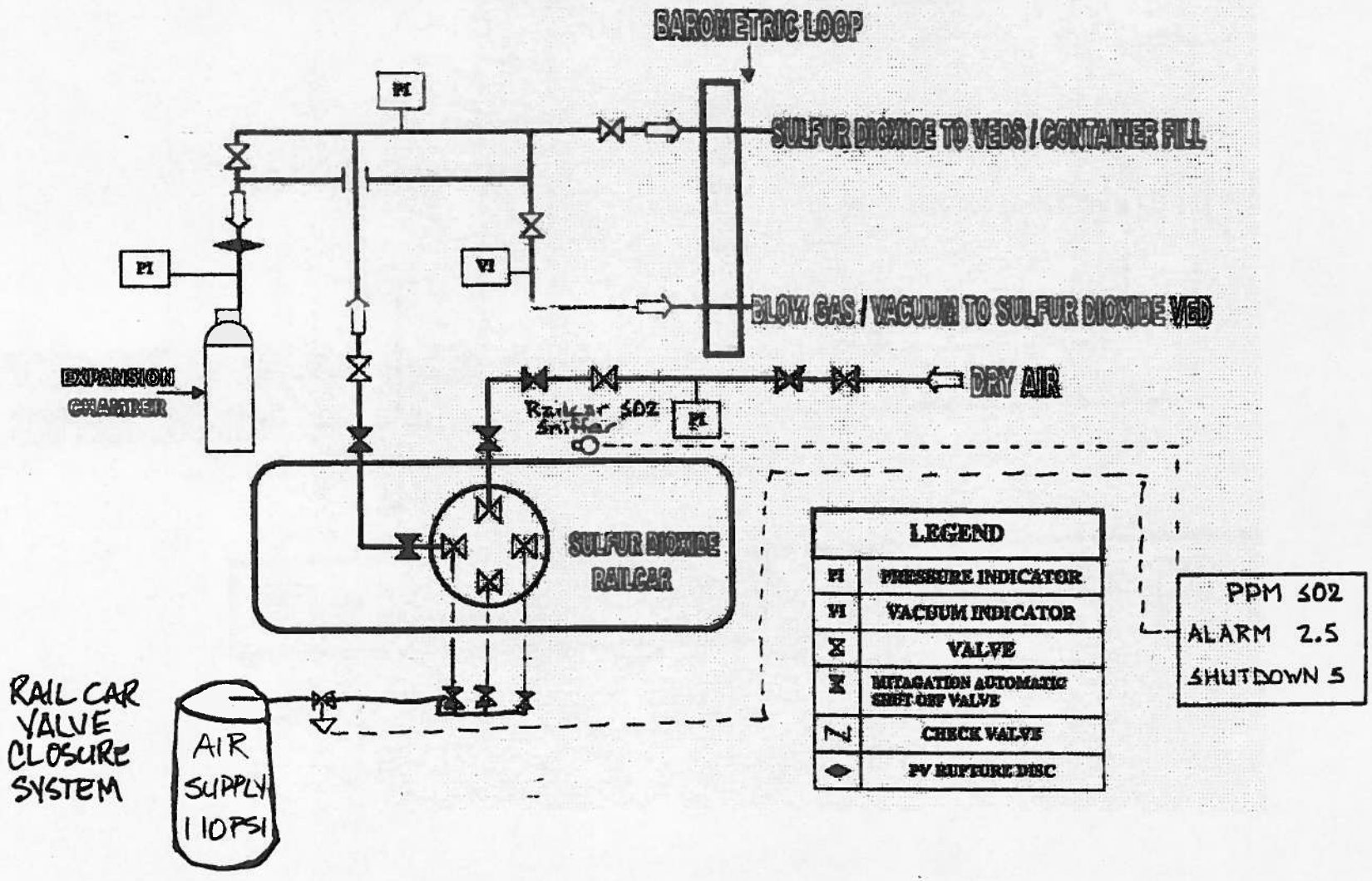
11 June 2009

SULFUR DIOXIDE RAILCAR PROCESS FLOW



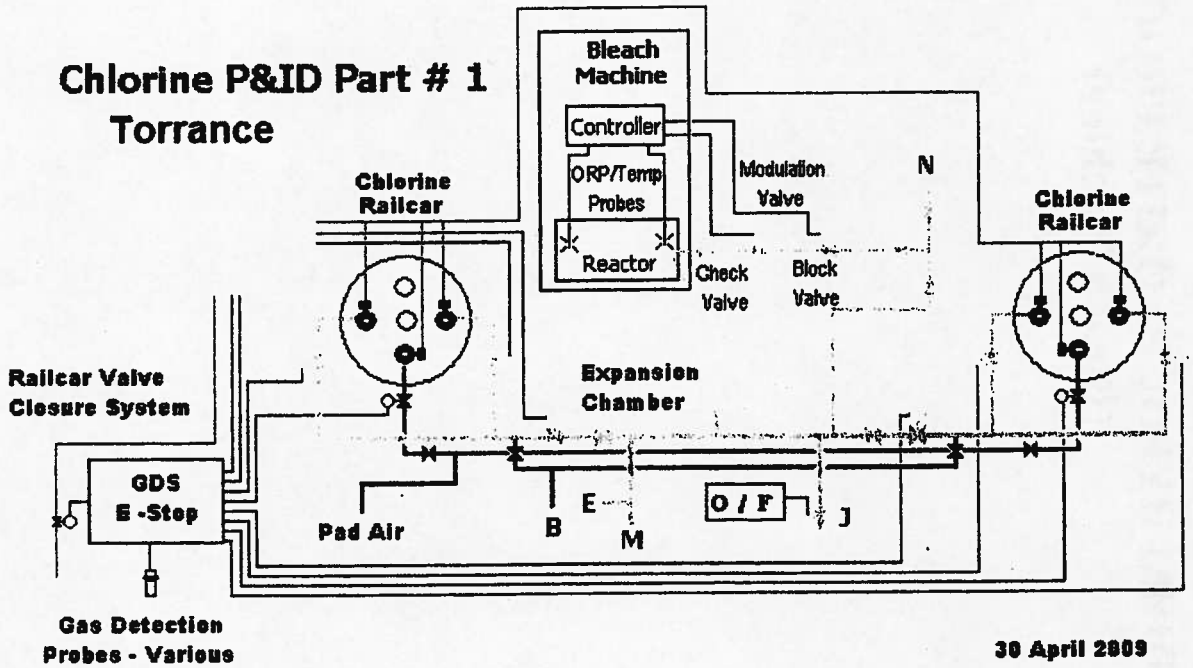

SULFUR DIOXIDE CONTAINER FILL PROCESS FLOW
BAROMETRIC LOOP
SULFUR DIOXIDE
BLOW GAS/VACUUM
PI
PI
DIGITAL INDICATOR
PI
PI
TON FILLING STATION
CYLINDER FILLING STATION
LEGEND
PI
PRESSURE INDICATOR
VALVE
SOLENOID

SULFUR DIOXIDE RAILCAR PROCESS FLOW

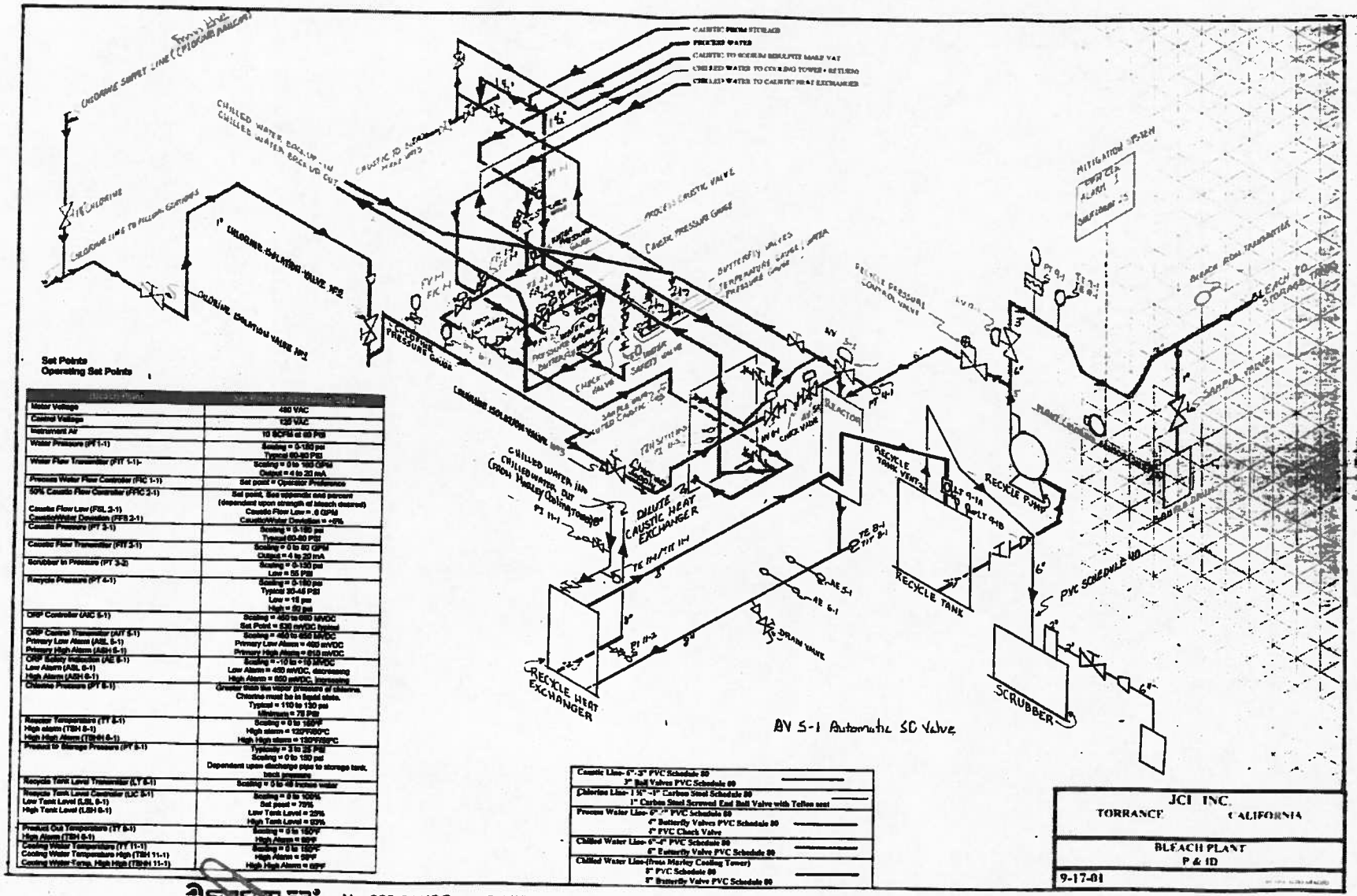


SODIUM HYPOCHLORITE PROCESS FLOW
(Bleach Machine)

Chlorine P&ID Part # 1
Torrance

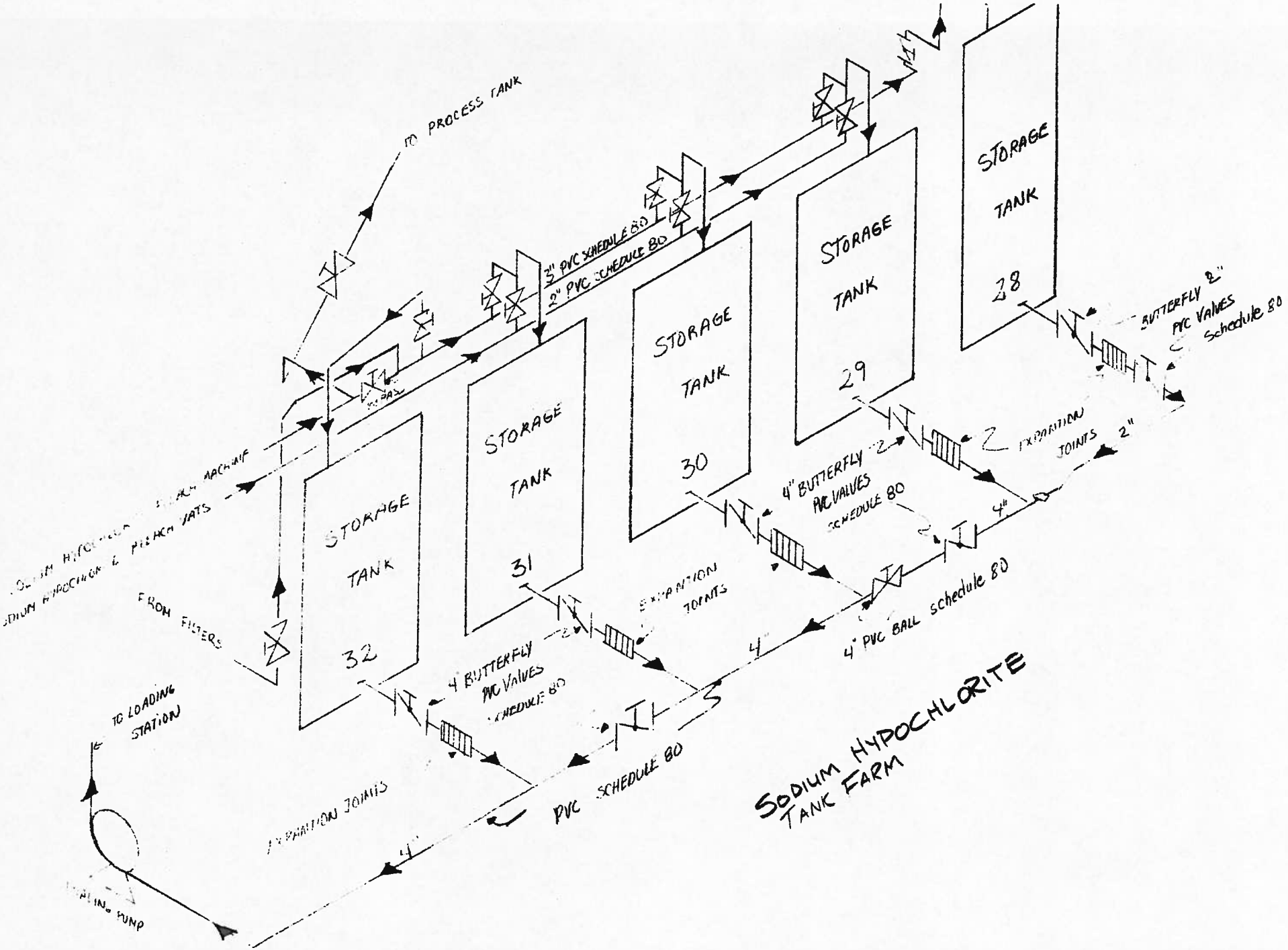


30 April 2009



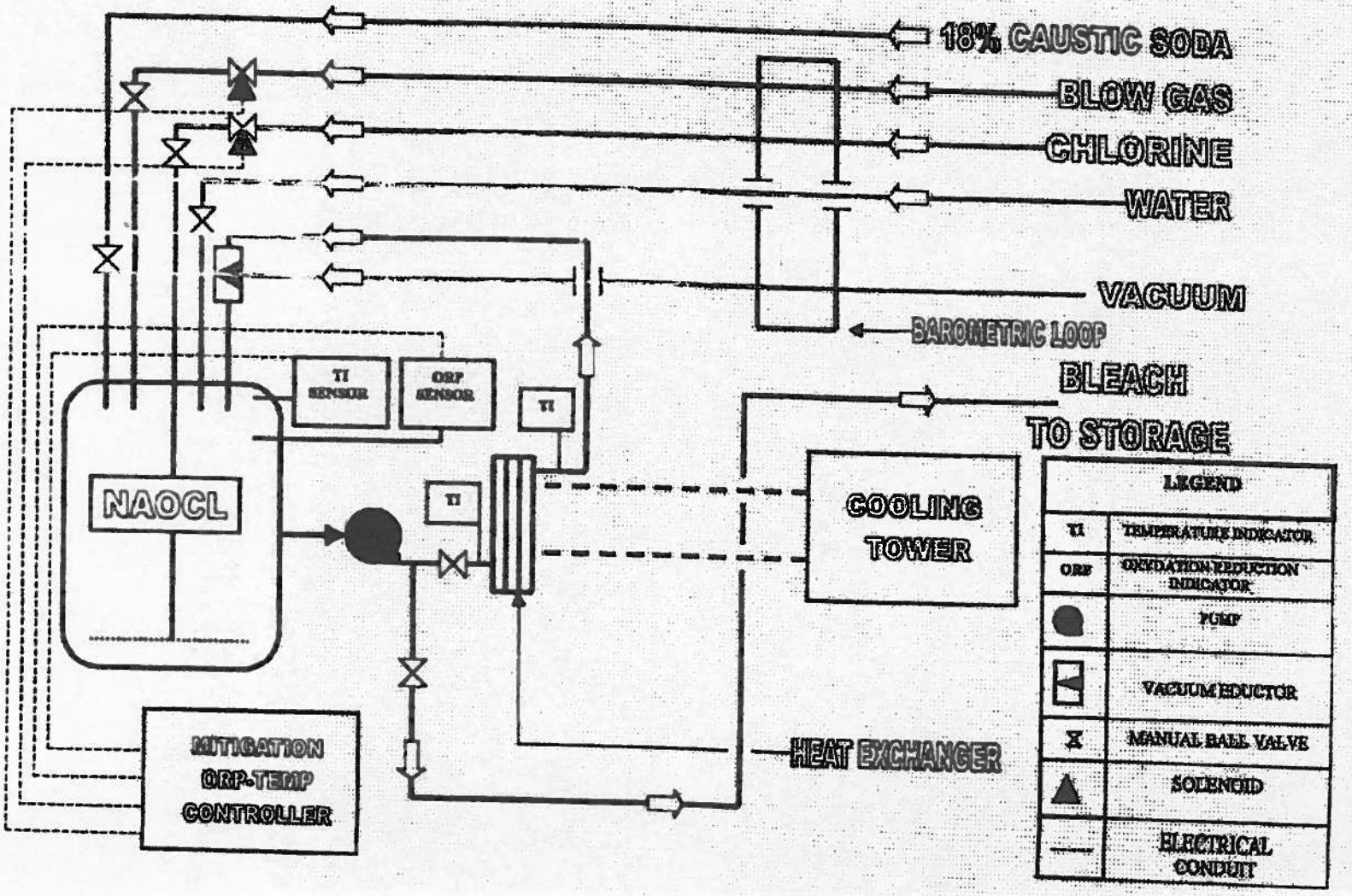
Set Points
Operating Set Points

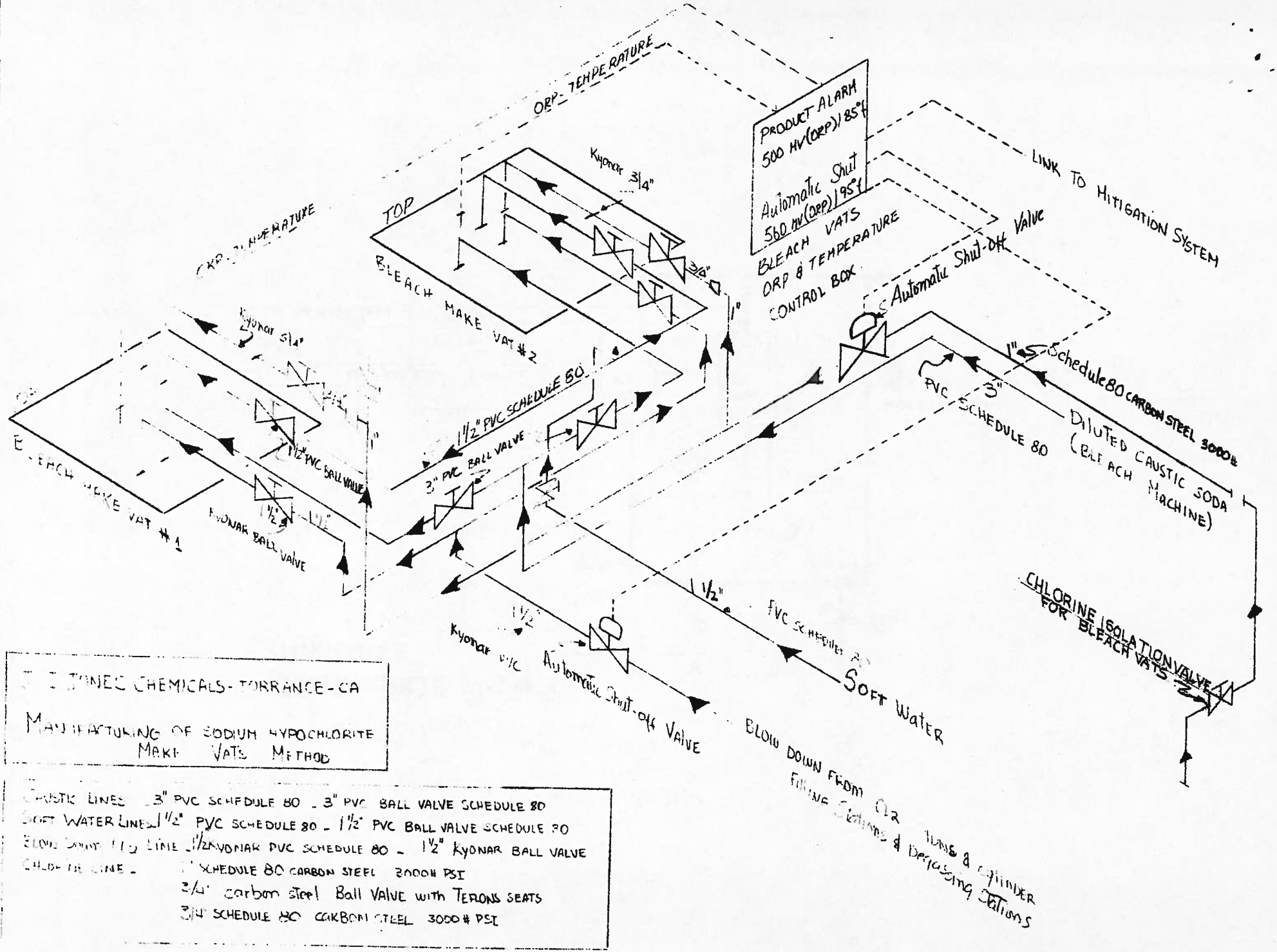
Motor Voltage	480 VAC
Control Voltage	120 VAC
Instrument Air	10 SCFM at 60 PSI
Water Pressure (PT 1-1)	Scaling = 0-160 psi Typical 60-80 PSI
Water Flow Transmitter (FIT 1-1)	Scaling = 0 to 100 GPM Output = 4 to 20 mA
Process Water Flow Controller (FIC 1-1)	Set point = Operator Preference
50% Caustic Flow Controller (FFIC 2-1)	Set point, See appendix and percent (dependent upon strength of bleach desired)
Caustic Flow Low (FSL 2-1)	Caustic Flow Low = .6 GPM
Caustic/Water Deviation (FFS 2-1)	Caustic/Water Deviation = +5%
Caustic Pressure (PT 2-1)	Scaling = 0-160 psi Typical 60-80 PSI
Caustic Flow Transmitter (FIT 2-1)	Scaling = 0 to 60 GPM Output = 4 to 20 mA
Scrubber In Pressure (PT 3-2)	Scaling = 0-160 psi Low = 50 PSI
Recycle Pressure (PT 4-1)	Scaling = 0-160 psi Typical 30-45 PSI Low = 15 psi High = 60 psi
ORP Controller (AIC 5-1)	Scaling = 400 to 900 MVDC Set Point = 630 mVDC typical
ORP Cooling Transmitter (AIT 5-1) Primary Low Alarm (ASL 5-1) Primary High Alarm (ASH 5-1)	Scaling = 400 to 900 MVDC Primary Low Alarm = 400 mVDC Primary High Alarm = 810 mVDC
ORP Safety Indicator (AE 5-1) Low Alarm (ASL 5-1) High Alarm (ASH 5-1)	Scaling = -10 to +10 MVDC Low Alarm = 400 mVDC, decreasing High Alarm = 600 mVDC, increasing
Chlorine Pressure (PT 6-1)	Greater than the vapor pressure of chlorine. Chlorine must be in liquid state. Typical = 110 to 130 psi Minimum = 75 PSI
Scrubber Temperature (TT 6-1) High alarm (TSH 6-1) High High Alarm (TSHH 6-1)	Scaling = 0 to 150°F High alarm = 120°F/50°C High, High alarm = 130°F/55°C
Product to Storage Pressure (PT 6-1)	Typically = 3 to 25 PSI Scaling = 0 to 150 psi Dependent upon discharge pipe to storage tank, back pressure
Recycle Tank Level Transmitter (LT 6-1)	Scaling = 0 to 48 inches water
Recycle Tank Level Controller (LIC 6-1) Low Tank Level (LSL 6-1) High Tank Level (LSH 6-1)	Scaling = 0 to 100% Set point = 70% Low Tank Level = 23% High Tank Level = 93%
Product Out Temperature (TT 6-1) High Alarm (TSH 6-1)	Scaling = 0 to 160°F High Alarm = 90°F
Cooling Water Temperature (TT 11-1) Cooling Water Temperature High (TSH 11-1) Cooling Water Temp. High High (TSHH 11-1)	Scaling = 0 to 150°F High Alarm = 90°F High High Alarm = 95°F


TO PROCESS TANK
3" PVC SCHEDULE 80
2" PVC SCHEDULE 80
STORAGE TANK 28
STORAGE TANK 29
STORAGE TANK 30
STORAGE TANK 31
STORAGE TANK 32
BUTTERFLY 2" PVC VALVES Schedule 80
2" EXPANSION JOINTS
4" BUTTERFLY PVC VALVES SCHEDULE 80
4" PVC BALL schedule 80
EXPANSION JOINTS
4" BUTTERFLY PVC VALVES SCHEDULE 80
FROM FILTERS
TO LOADING STATION
EXPANSION JOINTS
PVC SCHEDULE 80
SODIUM HYPOCHLORITE TANK FARM

SODIUM HYPOCHLORITE PROCESS FLOW
(Make Vat)

SODIUM HYPOCHLORITE BATCH PROCESS FLOW



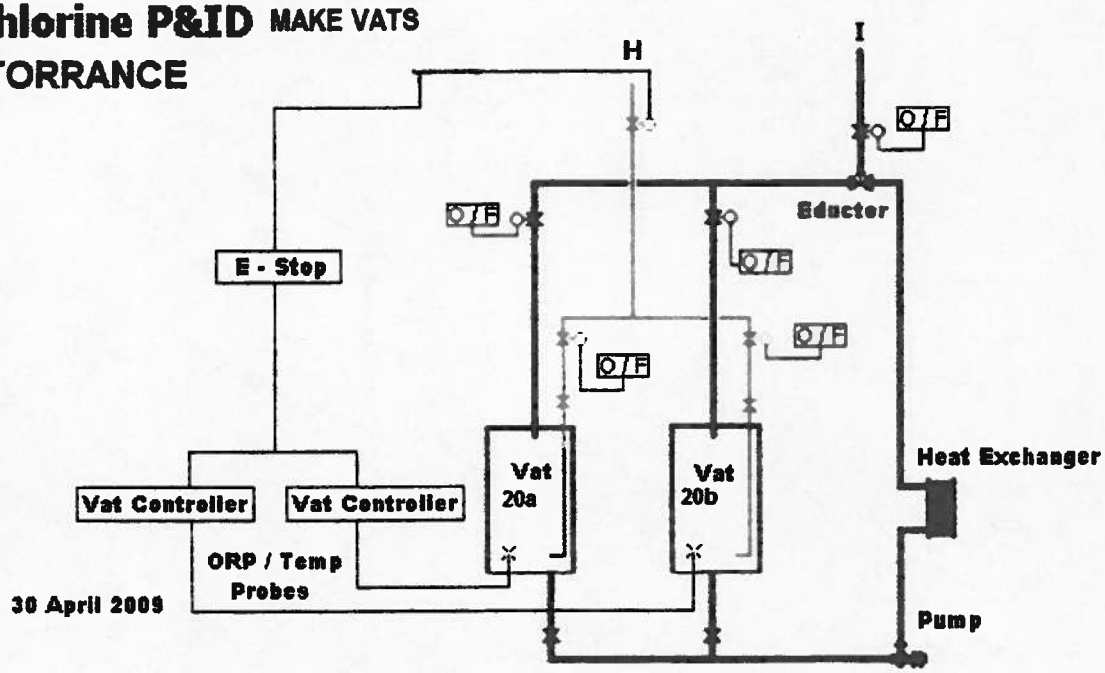


TONEC CHEMICALS - TORRANCE - CA

MANUFACTURING OF SODIUM HYPOCHLORITE
MAKE VATS METHOD

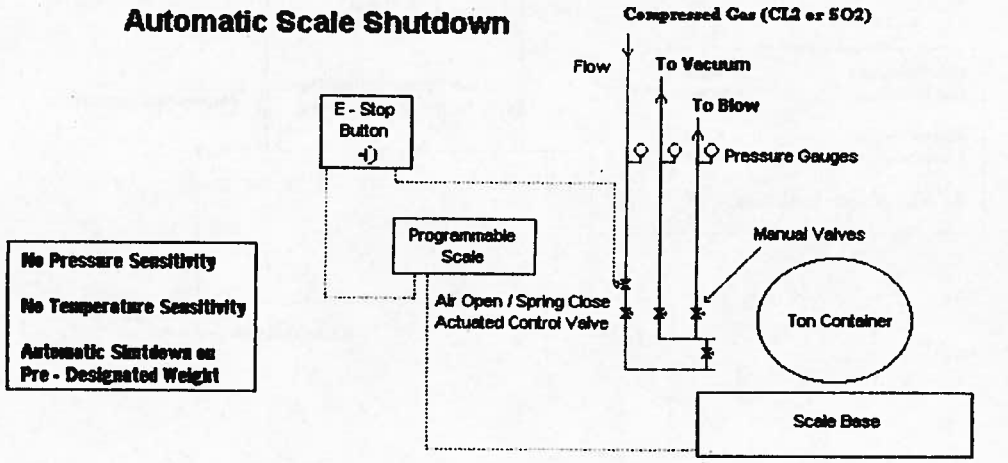
CAUSTIC LINES - 3" PVC SCHEDULE 80 - 3" PVC BALL VALVE SCHEDULE 80
SOFT WATER LINES - 1½" PVC SCHEDULE 80 - 1½" PVC BALL VALVE SCHEDULE 80
BLOW DOWN 1½ LINE - 1½ KYONAR PVC SCHEDULE 80 - 1½" KYONAR BALL VALVE
CHLORINE LINE - 1" SCHEDULE 80 CARBON STEEL 3000# PSI
3/4" carbon steel Ball Valve with TEFLON SEATS
3/4" SCHEDULE 80 CARBON STEEL 3000 # PSI

Chlorine P&ID MAKE VATS
TORRANCE



30 April 2009

Automatic Scale Shutdown



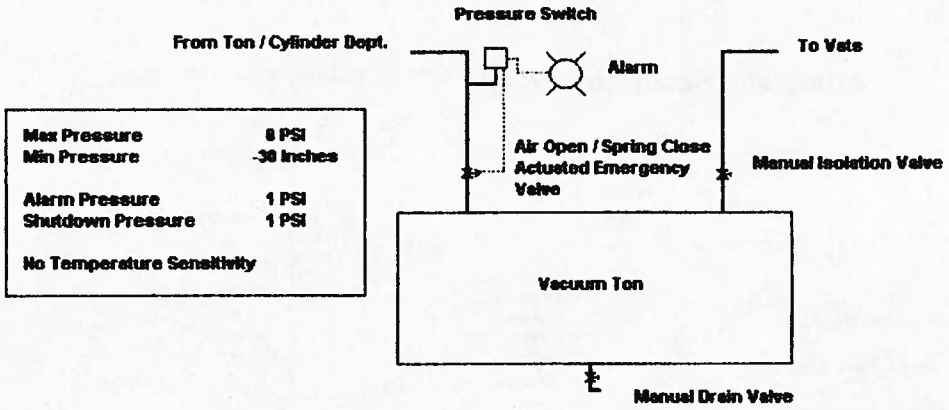
No Pressure Sensitivity

No Temperature Sensitivity

Automatic Shutdown on Pre - Designated Weight

3 Oct. 01

Vacuum Alarm System

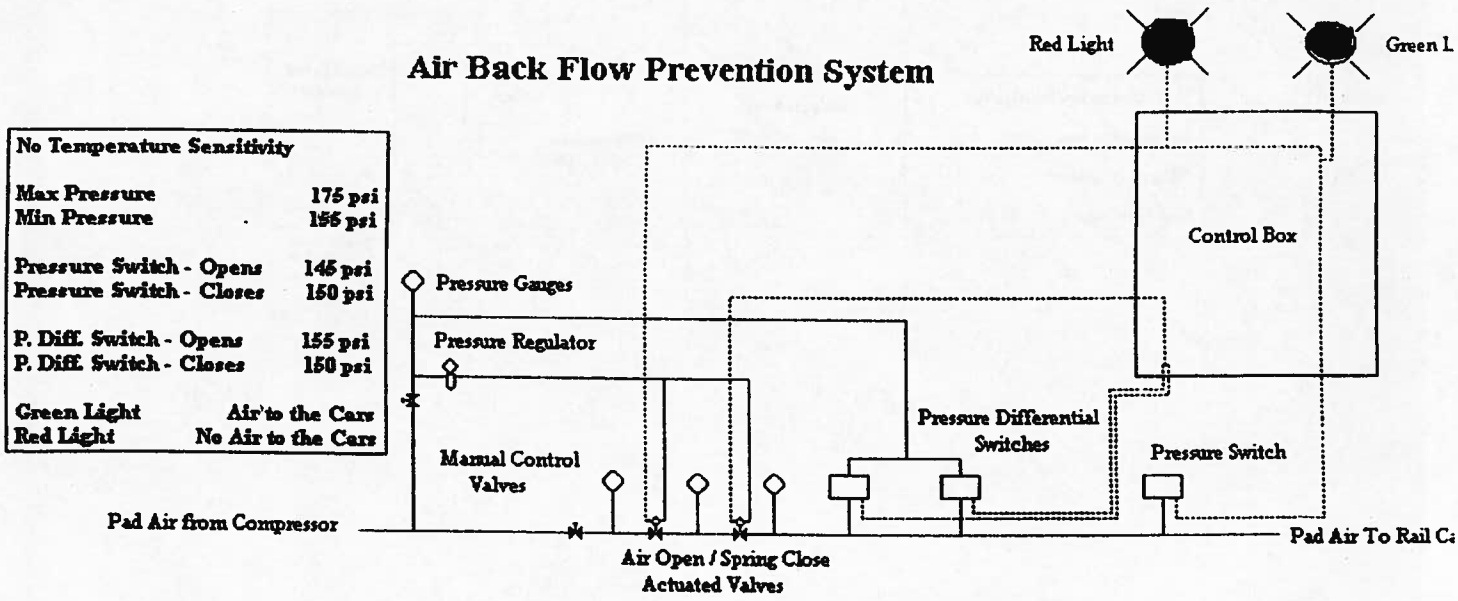


Max Pressure	8 PSI
Min Pressure	-30 Inches
Alarm Pressure	1 PSI
Shutdown Pressure	1 PSI

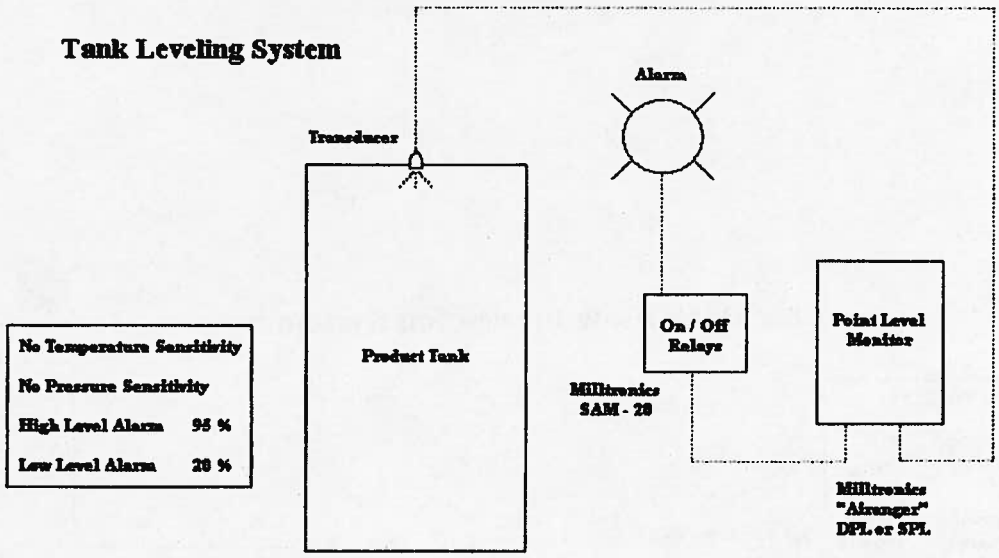
No Temperature Sensitivity

3 OCT. 91

Air Back Flow Prevention System



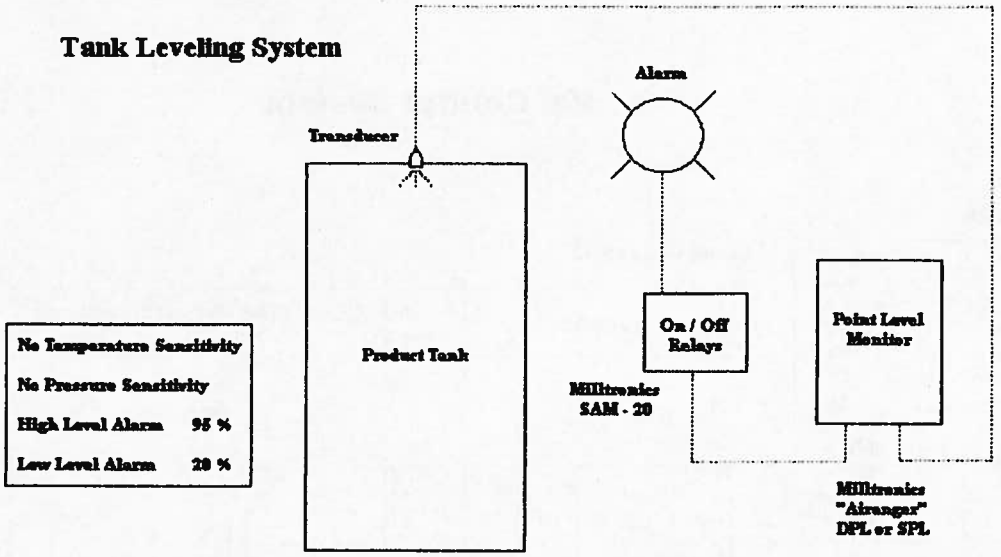
Tank Leveling System



No Temperature Sensitivity	
No Pressure Sensitivity	
High Level Alarm	95 %
Low Level Alarm	20 %

3 Oct. 01

Tank Leveling System



No Temperature Sensitivity	
No Pressure Sensitivity	
High Level Alarm	95 %
Low Level Alarm	20 %

3 Oct. 01

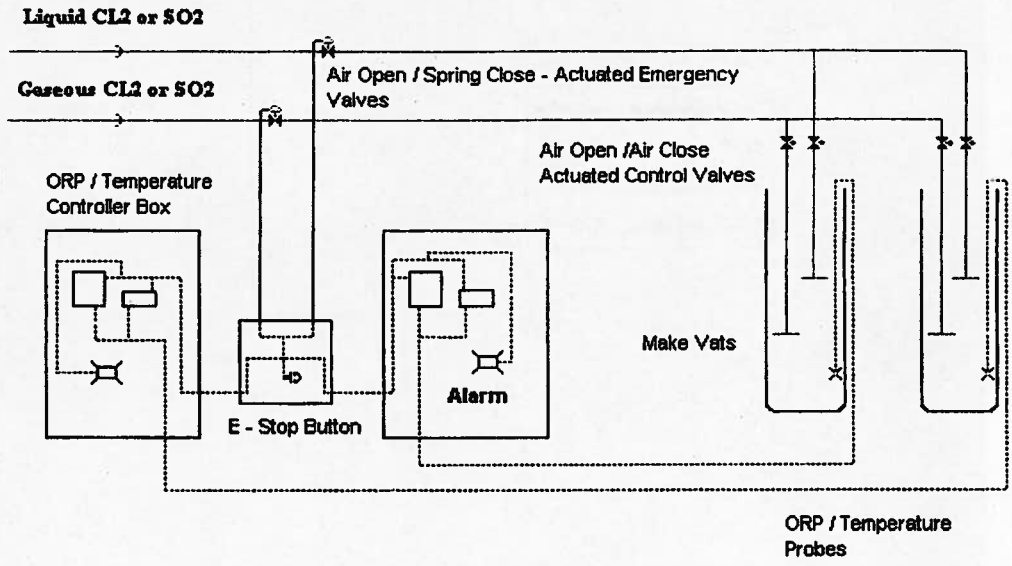
Vat Control System

Bleach

Max Pressure	**225 psi**
Min Pressure	**5 psi**
Max Temperature	**110 f**
Min Temperature	**40 f**
Alarm Temperature	**85 f**
Shutdown Temperature	**95 f**
Max ORP	**570 mv**
Min ORP	**450 mv**
Alarm ORP	**530 mv**
Shutdown ORP	**560 mv**

Bisulfite

Max Pressure	**225 psi**
Min Pressure	**5 psi**
Max Temperature	**130 f**
Min Temperature	**80 f**
Alarm Temperature	**120 f**
Shutdown Temperature	**130 f**
Max PH	**12.5 su**
Min PH	**3.5 su**
Alarm PH	**4.0 su**
Shutdown PH	**3.5 su**



2 Oct. 01